Gulstonian Lectures
ON
NEUROSES OF THE VISCERA.

Delivered at the Royal College of Physicians,

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LECTURE II.

MR. PRESIDENT AND GENTLEMEN,—We all know the story of the resentful lion who had so often been painted by the man, and who longed for the time to come when the man in his turn should be painted by the lion. Is it because all medical books have been written by men that gastralgia, one of the sharpest arrows in the armoury of pain, is in many of them dismissed with a few words as a malady of "hysterical women"—of women, that is, whose sufferings are due in part to effeminate habits and constitution, and in part to a kind of fanaticism which prompts them to cherish or to imagine pain, or to make a bitter cry about small matters? We all ought to know that gastralgia is common enough in man also, though certain writers appear to deny that this or any other visceral neurosis can exist where no uterus is; and in my first lecture I have endeavoured to formulate a distinction between what I may call the upper class of neurotics and their degenerate relations, the hysterics, asserting therein that in hysterics pain is not a more but a less common inheritance, and that to neurotics it is chiefly given to suffer pains and the renewal of pain, and to bear all with singular fortitude and spirit. As such a zealous neurotic the Sompnoure posed when he described himself thus:—

> "I am a man of litel sustenance;
> My spirit hath his fostring in the Bible;
> My body is ay so redy and so penible
> To waken, that my stomak is destroied."

For of all the neuroses of the stomach gastralgia is the chief; but around it gather, in more or less close association, flatulence, vomiting, hyperæsthesia, and miseries such as distension, sinkings, cravings or loathings of food, and these may exist in various associations, or may exist singly. As in angina pectoris and the pseudo-angina, so in gastralgia, the spinal nerves may be included in the paroxysms, or may take even a chief part in them, the visceral and overlying spinal nerves being grouped in function and in suffering together. In order to study this class of cases more carefully, I have gone over the case-books of my chamber consultations for ten years past—namely, from the year 1874 to the year 1883 inclusive. From them I have extracted 139 cases of gastric and abdominal neuralgias. These cases remain after eliminating all that are doubtful or comparatively trivial in degree; all cases attended with important uterine disorder, or complicated with substantial defect in any organ whatsoever, or with disease; all hysterical cases, and all cases of fretful or whimsical persons prone to expand or to exaggerate their symptoms. The selected cases, then, are the cases of persons of whom I have some tolerable notes, who were straightforward and truthful, and who are, or were, the subjects of neurotic or neuralgic affections lying under the diaphragm and above the pelvis. Now, the great majority of these cases are gastralgics, the region of the stomach being by very far the commonest seat of abdominal neuralgia. Of the gastralgics, the majority are women, in the ratio of two to one. In men and women gastralgia is by no means confined to middle life, as Learned supposed, but is found at all ages, from fourteen to sixty, being most common between twenty and forty-five. Like migraine, it tends to die out in middle life; and, like migraine again, it is attended less and less with vomiting as age increases. Gastralgia comes on earlier in women than men, apparently by some ten years. A gastralgic man is rare before the twenties; girls often begin in their teens. The earlier maturity of the girl sufficiently explains this difference, which is also remarkable, though I think in less degree, in migraine. Migraine may, however, begin at very early ages in either sex. Of associated affections migraine is by far the commonest; and if we associate migraine and neuralgia of the head and face together, the number of cases in which these are found with gastralgia is very great, seeming to be fully 80 per cent. Fortunately these affections do not often coincide in time, but rather alternate variably one with the other. A large number of gastralgics, then, include migraine or neuralgia of the head and face in their life histories. Another disorder commonly associated with gastralgia is asthma, an observation which scarcely needs either explanation or much asseveration. Neurotic vomiting may accompany, or rather alternate, with asthma, as the gastralgia may; and so again may voluminous flatulence, borborygmi, and other such neuroses. Like asthma, gastralgia is not unfrequently nocturnal in its recurrence, and is likewise often aroused by improper food, or by the contact of any food whatever. Hence the persistent confusion of gastralgia with dyspepsia. Asthma and gastric neuroses, moreover, if not concurrent in the individual, are often concurrent in families, one member suffering from the latter, and his brother, sister, or other relative from the former. With both these vagus neuroses run the cardiac neuroses, including true angina. I am now attending a gentleman with Mr. Jessop, who suffered terribly from paroxysmal gastralgia in past years, and in whom we have now to deal with the true angina. In gastralgics occur violent attacks of palpitation, or, more characteristically, attacks of slow or intermittent pulse, as in the following case.

Mrs. ——, aged twenty-four (No. 371, 1875), suffers from marked gastralgia. She has one child, which she is nursing. She consults me now for pain in the region of the heart of a dull prolonged kind, ending in a sense of exhaustion. The pain may strike to the back and under the left shoulder-blade. At such times the heart becomes very slow (48 to 50), intermittent and irregular. Curiously enough, such attacks are brought on at once by putting the child to the breast, even before much milk is withdrawn. This sequence is analogous with the sequence of gastralgia after the ingestion of food, the neuralgia being awakened by a peripheral irritant. She soon recovered on appropriate treatment; but in 1881, after some menorrhagia, the same thing recurred. She again recovered on like treatment. She had had one child between these dates without any disorder of health.

In No. 371 appeared moderately a radiation of pain upon the spinal nerves; this, in other cases, may extend or intensify itself to a degree of pseudo-angina which may even be indistinguishable from real angina.

No. 283, 1878, male, aged thirty-seven. Of nervous temperament and a zealous worker; he is liable more frequently to violent gastralgia, especially after worry and excitement. Less frequently he has "heart-spasms." In these he has a sense of swelling at the heart, and pain and numbness down the left arm. At the same time the pulse becomes "much enfeebled," and is said to be slowed down as much as 20 in the minute, or may even become imperceptible (this from his own doctor). These attacks have come occasionally for many years. Physical exertion does not call them forth. All organic factors seemed normal.

Cases like these may be culled from every year's entries. In one lady, aged thirty-three (No. 261, 1881), wholly free from menorrhagia or leucorrhœa, an intense aching, with a sense of extreme exhaustion and sinking would come on at the heart; it recurred then daily, and it was always periodic, appearing about 4 or 5 P.M. She was compelled at such times to lie down and "press the heart," turning over on the left side towards the prone position. These attacks were encouraged especially by any abbreviation of sleep or by fatigue. She herself is subject to gastralgia without dyspepsia, and her mother was mildly epileptic.

Dr. Ramsay of York has often consulted me concerning Mrs.——, aged forty-three, who more than once, with miscarriage, had lost blood heavily. She is very subject also to menorrhagia, which is scarcely kept in check by close attention to local and general remedies. She is, however, wholly free from any persistent affection of the womb or of other organs. She suffers occasionally from gastralgia, but her great distress consists in attacks of stabbing pain, as if the apex of the heart were pierced by an arrow; the pain thence extends with intense cardiac oppression down the left arm to the fingers, causing a numbness there. The pulse falls from an average of 70 to 60, but is not otherwise much embarrassed. She has the faintness and dread, and, in a word, her symptoms are not in themselves to be distinguished from angina pectoris.

The same difficulty of immediate diagnosis is found in the

very similar case of Mrs. ——, a patient of Mr. Lee of Dewsbury. In her also is a persistent disposition to menorrhagia, and also to utero-vaginal catarrh. In these and like cases diagnosis depends less upon the character of the attacks themselves, and more upon the other records. The attacks are commonly due to such losses as menorrhagia or severe leucorrhœa or to prolonged mental distress; they are not directly produced by bodily exertion, but are often caused indirectly by the resulting fatigue. In some of my cases, again, the pains are more extensive than is usual in angina. In some the pain runs down both arms alike, or runs down both arm and leg of the left side, or again springs upwards from the cervical plexus to the same side of the face and head. Valleix' points may be detected in the course of the spinal nerves, but in many cases of pseudo-angina they are not definitely to be distinguished. In women we may rely on the lesser frequency of true angina in them, though the pseudo-angina is often met with in men. About 20 per cent. of my cases of pseudo-angina were in men. In one gentleman, of neurotic habit and ancestry, and whose family affairs were laden with sorrow, such attacks occurred, involving seriously the action of the heart itself, and producing the dread, the ashen countenance, and other marked signs of true angina. As his luck in many ways turned for the better his attacks diminished, and I believe he has now been free from them for nearly ten years. A favourable opinion in his case was founded upon his age (thirty to thirty-six), his diathesis, his unhappy circumstances, and his organic soundness. The tendency in all these cases to retardation of the pulse brings them, apparently, into the group of vagus neuroses, with asthma and gastralgia; nor will intercostal and cervico-brachial neuralgias cover all their phenomena, such as the dread, the pulse-changes, and the peculiar pains which such patients refer instinctively to the heart (as in Case 261, 1881, *supr. cit.*)

It is perhaps impossible duly to attribute to each nerve or system of nerves its own share in these phenomena; even the essay by Professor Eulenburg seems to me to leave the matter pretty much as any intelligent observer may well have guessed it for himself. Still I think it seems clear that the phenomena of pain and spasm are probably due to the pneumogastric nerve and the intercostal and spinal nerves associated with it, while such other sufferings as faintness, sinkings, cravings, distensions, palpitations, abdominal pulsations, flatulence, retching and vomiting, pyrosis, diarrhœa, lithatic or watery urine, insomnia, and so forth, may be attributed to the sympathetic alliances. Pulsations of the abdominal aorta in neurotics, whether men or women, may be so definite, may simulate aneurism so closely, and do so often appear after some history of effort or strain that diagnosis upon direct observation may be as difficult as in the case of pseudo-angina, and may as therein derive most of its force from the history of the patient and of the family disposition. Avoiding digression, however, and returning to the association of pain in the spinal nerves with pain in the viscera, we observe that cervico-brachial and intercostal pains are found with gastralgia as well as with the pseudo-angina. Out of many cases of the kind I may refer to Miss —— (No. 504, 1883), who suffers from gastralgia of the ordinary type, but severely. The attacks are nocturnal. The pain runs down the left arm, until the arm feels quite benumbed and useless. She has faint feelings, but no anginiform distress, her catamenia are regular and normal, and she has no leucorrhœa. Her family history is very neuralgic. She bore arsenic badly, but was quite cured by a careful use of it.

Mrs. ——, aged thirty (No. 403, 1881), had visceral neuralgia ten years ago, and now for two years past. She has ordinary epigastric gastralgia, unconnected with digestion; and her attacks are usually nocturnal. The pain runs into the left submammary and axillary regions, and into the left arm. At other times she had suffered from recurrent enteralgia, similar in character to the former, but then running down into the groin. Her uterus and ovaries are normal, and her catamenia regular. She has no leucorrhœa. At the beginning of her attacks she passes urine frequently—say six times in an hour; then, as the attack subsides, the bladder likewise goes to rest. She came to me on account of frontal and parietal cephalagia of fourteen days' duration, during which time she had had no visceral pain.

Mrs. —— (No. 38, 1877), aged thirty, has had migraine and cephalalgia for years. Her sister is a pronounced gastralgic. For two years she has been subject to attacks, "pinning the shoulders tight," and girdling her with pain round the waist. The pain almost stops the breathing, and so continues for two hours. She then vomits, and the pain departs. She never had jaundice. She looks worn out with pain, but all the organs and functions seem normal.

Mr. ——, a cashier (No. 86, 1876), aged twenty-eight, had pains as in the preceding case; they were periodical in recurrence. But in his case the attacks culminated not in vomiting, but in diarrhœa. He recovered completely on tonics, with rest and change of air. He had a neurotic history, personal and inherited.

Miss ——, aged thirty (No. 51, 1876), presented symptoms almost identical with those of No. 38, 1877, including the critical vomiting. She was also subject to morning vomiting, attended by frequent micturition. She used to have headache with the vomiting, but not for some time past, though she has severe temporal neuralgia occasionally.

Another very curious symptom which occasionally occurs with gastralgia is yawning. I have seen this more than once, and may quote P. T. P——, a grocer, aged thirty-three (No. 571, 1882), who suffered from gastralgia in the usual way, but with an incessant and irresistible tendency to yawn.

Vomiting is a symptom which, in some cases of gastralgia, takes a very prominent place, but in others is never seen. I have already drawn a parallel between the vomiting of cephalalgia and the vomiting of gastralgia. In either case the vomiting may stand alone—may stand without headache, or, again, without stomachache. In such cases, it may only be known from the case history whether the vomiting belong to the one order of things or to the other; but the vomiting allied to migraine is more commonly in the morning, is more periodic, and recurs at longer intervals; the vomiting allied to gastralgia is more dependent upon the ingestion of food, is irregular in recurrence, and may, indeed, be daily or almost incessant. As an example of the former, of migraine without headache that is, let us take the following case.

Miss ——, aged twenty-seven (No. 14, 1880), comes of a neurotic family, and she herself had had migraine for nine years. Then the headaches gradually wore off, the vomiting attacks only remaining. These were not very violent, but returned at short intervals. They would last for about two days, during which time she had to keep as quiet as if she had a sick-headache. Mental work or excitement most readily recalled the attacks. Her uterine functions and those of the digestion and bowels were all normal. This patient was a lady of attractions both personal and mental, and her case presented many interesting features. Her vivid perceptions, alertness, incessant and beneficent activity, and utter unselfishness, marked her as a type of the more highly endowed neurotic, and I took much interest in her case. A good deal of amendment was obtained by pointing out to her the truest economy of strength and work, and by insisting upon complete rest at times of malaise.

Mrs. —— (No. 22, 1880), presented similar symptoms. She used to have full migraine; but from it the headache gradually disappeared, and left only intense and prostrating vomiting, which would recur much as the full migraine used to do, and would last, like it, for five or six hours and then vanish. In her no functional derangement was present, and she derived great benefit from a mixture of bromides and hypophosphites. The same combination was also very valuable in the preceding case (No. 14).

In such cases the vomiting, though a visceral neurosis, would seem to be of cerebral origin.

Let us now turn to cases in which vomiting seems to be a limb or remnant of gastralgia. The first is such a complex case as we might well expect to find. No. 44, 1875, male, aged fifty, for "all his life" has been liable to sick headaches. But these would often alternate with gastralgic attacks, which were also attended with vomitings. He is of very nervous temperament, has many cares, and no holidays. Facial neuralgia is a common ailment in him; but, for two years past, his trouble has mainly been vomiting in the morning, a little phlegm only being ejected. Day after day he finds himself unable to retain food until dinner-time. Now, this seems to have been gastralgic vomiting; and he was cured by a course of bromide of ammonium, with hydrocyanic acid, followed by a course of Easton's syrup, with much general good advice. Two years later he had had no return of the vomiting, nor of the gastralgia. I should add that he was a total abstainer of seventeen years' standing, and is so still. Now, it is somewhat remarkable that, although vomiting is common in gastralgia, and is common also in migraine, and although migraine and gastralgia may commonly arise in the same

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patient, yet migraine and gastralgia seldom or never occur together. I suspect, therefore, that the vomiting of migraine is not identical in mode with that of gastralgia.

Although, as I have said before, vomiting is sometimes a climax-symptom in gastralgia, as in migraine, yet in the former case it is, perhaps, reflex; in the latter it is probably allied to the vomiting of encephalic tumour or of concussion. Take again, for instance, No. 25, 1878, male, aged twenty-three. At times of a morning he awakes in low spirits, and feels apprehensive and miserable. His appetite has vanished, nausea comes on, he vomits, and, after free vomiting of nothing, is all right. Now, this young man was quite cured by guarana. I have no history of frank migraine in him, but, like the former cases, I believe it to be migraine *sine* cephalalgia.

But Mrs. ——, aged thirty-five (No. 128, 1878), carries us, on the other hand, towards the stomach. She has leucorrhœa, a soft uterus, and flabby muscles everywhere, her heart-sounds being short and weak. She has no uterine catarrh. Her catamenia are disposed to anticipate, without being any the less in quantity. She is subject at times to intense neuralgia at the supra-orbital notches and in the orbits "poking her eyes out." Now every morning before rising she has nausea, which proceeds to vomiting. This is especially worse when she is much below par. There is also a great expulsion of inoffensive wind, and clear water runs from her mouth. At the same time there is pain between the shoulders. Her appetite is never good. She is very temperate in the use of alcohol. The family history is phthisical.

Here we clearly have to do with the stomach, and I regard pyrosis as being for the most part a pure neurosis, probably vaso-motor; for the following case of Mrs. ——, aged forty-one (No. 503, 1881), takes us a step further. Seventeen years ago she fell ill, as at present, but on the whole she had enjoyed fair health in the interval. Her attacks are as follows. A sensation of languor and exhaustion is followed by intense pain at the stomach, and vomiting soon sets in. She brings up clear water, and clear water only. If food comes, it is by chance, for the attacks have no connexion with diet, nor with meal-times. The attacks may recur even as often as three or four times in twenty-four hours, and with them she has also a pain in the back, "screwing her to death." But not unfrequently she has the vomiting and ejection of water only, unattended then with either pain. She never has any nausea. Her uterine and other functions are normal, and the attacks do not favour the catamenial periods. All commemorative facts, personal and relating to family, have a neurotic quality. This lady recovered her health at the time under the use of arsenic and like remedies, and remained well until a little while ago, when she called upon me, complaining of some return of the vomiting, but without any gastralgia. The stomachache, she said, "used to be terrible."

Here, then, we have in close association, and evidently of one nature, gastralgia, vomiting, and pyrosis or the ejection of water. In the similar case which preceded it, we had the ejection of volumes of wind also. This, I say, would lead us to believe that pyrosis, for the most part, is a gastric neurosis; and if we are then lead to inquire into the personal and family histories of the subjects of pyrosis, we shall find that, as a general rule, these persons present evidence of belonging to the neurotic class.[1] Indeed, the regurgitation of food itself is by no means always due to an error of digestion; it occurs in many neurotic persons as a purely reflex neurosis during normal digestion.

Henry B——, aged twenty-five (No. 631, 1881), tells me that for some time he has been unable to prevent the regurgitation of food after all his meals, which is very annoying and unpleasant to him. He is not conscious of any dyspepsia whatever, nor can I find any evidence of it. His tongue is clean, his bowels are regular, and his urine of normal quality. He called upon me because of a severe attack of neuralgia in the infra-orbital and dental branches of the right side of the face. No local source of irritation could be found. The remarkable thing is that on that day and thenceforth the regurgitation wholly ceased, and under the use of quinine the facial pain ceased also. He had no return of either disorder during my observation of him.

The grocer, P. T. P—— (No. 571, 1882), who yawned so much, had also this vexatious regurgitation of mouthfuls of food after his meals. The symptom is doubtless due to an irritability of the muscular walls of the stomach setting up an excessive, and it may be an inverse, contraction of the viscus under the stimulus of digestion, and is a phenomenon of the same order as painful hyperæsthesia of the inner surface of the organ, of which I shall have to speak at length. Before passing to that symptom, however, I must leave regurgitation, to consider another form of vomiting—vomiting, that is, not on the empty but on the full stomach. This terrible malady is described commonly enough, yet it seems to me that it is but ill-discriminated, being mixed up with hysterical vomiting on the one hand, or handed over to the gynæcologists on the other. Uterine vomiting, on the one side of it, is to be known by due investigation of the case, and is curable by uterine medicine or surgery. Hysterical vomiting, on the other side of it, is not so easy to separate from the malady I have in hand, unless there be, as for the most part there is, the broad difference that hysterical emesis is consistent with fatness, gastralgic emesis never is, but leads straitly to emaciation. In many cases the vomiting is preceded by pain, more or less severe, and in these ulcer is often suspected, but in others there is no pain whatever. In both cases—in the case of those with pain and those without—the cause is cognate, if not identical. Let me instance a case from Dr. Salter's work on Asthma (ed. 1868, p. 256)—one adduced by him as an instance of "perverted innervation of the pneumogastric nerve." Condensed to the utmost, the story is this.

A little girl, aged eight, rejected food of any kind the moment it was swallowed. There was no pain, no tenderness, no feeling of sickness at any other time. After vomiting had emptied the stomach, she would be quite well. The same thing occurred with any little matter, such as blackberries, that she might eat between meals. She fell into weakness and emaciation; all remedies being useless. Some years afterwards Dr. Salter made inquiries about her, and found that the vomiting had been supplanted by spasmodic asthma. The two maladies had, indeed, alternated with each other at times, the vomiting coming on when the asthma was better.

It is enough to make one's blood boil to hear of a poor girl, wasted to a shadow by such a distress, treated, almost with gibes, as hysterical, when she is the subject of a malady as real as the doctor's own toothache, which, in its turn, might vanish, by the way, the moment he should find himself on the dentist's door step. I have a case in my mind which was recorded as hysteria by the late Mr. Skey, in the *Medical Times and Gazette*, 1866, vol. ii.[2] In this case intense suffering followed the ingestion of food. The poor girl had foolishly yielded to the dread of food, and was in a pitiable state of starvation and distress; and yet, because Mr. Skey succeeded, as an entire stranger might well do, in diverting the sufferer by bright conversation on pleasant subjects, he neatly labels her as hysterical. I shall return to these cases presently. Hysteria may simulate gastralgic vomiting, as it may simulate asthma, but we should do ill for that reason to treat all asthmatic girls as hysterical, because their dyspnœa is neurotic. Happily, these cases of obstinate gastralgic vomiting, for so I will call them, are not very common, if we carefully separate them from hysterical imitations of them, from gastric catarrh, from alcoholism, from uterine vomitings, and so forth. Still, there are too many of them, small as the class may be, and we may properly call the malady gastralgic vomiting, seeing that the mode of them is the same as of the cases wherein pain is also a factor. In some gastralgics, for instance, the two symptoms are not synchronous—the vomiting and the gastralgia replacing each other, as the vomiting and the asthma replaced each other in Dr. Salter's case above cited; or the vomiting may occur at one hour or under one set of circumstances, and the pain at another time and under other circumstances. For instance, in one of my patients, painless vomiting followed the meals, and soon gastralgia of the ordinary type came on in nocturnal seizures, after the manner of its cousin asthma. I find another case, under No. 112, 1881. Miss ——, aged twenty. At sixteen years of age she was subject to facial neuralgia, then to pain in the left chest, and down the left arm. This left her in eight weeks, and she remained well for some months.

[1] One of my audience told me, after my lecture, that in himself violent supra-orbital neuralgia is wont to resolve itself with a copious watery difluxion from the nostril of the same side.

[2] For this reference and much help of the kind I am indebted to the invaluable labours of Dr. Neale, the compiler of the Digest.

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Then gastralgia appeared. At first, this arose immediately on eating, or within ten or fifteen minutes thereafter. Then this pain vanished, and she became subject to gastralgia on the empty stomach only. This in its turn disappeared, and vomiting set in. The vomiting had gained upon her, and now she vomits all her food. It comes up in a mass as eaten. She never brought up blood or mucus. She is emaciated, but all functions and organs seem normal. There is no evidence of hysteria. She made a good recovery on arsenic.

We are thus led to the cases which simulate gastric ulcer; and in which, as I have said, diagnosis, often difficult, is sometimes impossible. No doubt I have at times mistaken a case of ulcer for gastralgia, and at other times have assumed the existence of ulcer when gastralgia and gastralgic vomiting alone were present.

Such cases, if not familiarly known to the profession, are, at any rate, so far known to the closer observers as to make it unnecessary for me to give the long case-histories which such patients afford. Taken shortly, we find this form of gastralgia most frequently in young women; and it is marked by the sequence of ingestion of food, severe pain in the stomach, vomiting and relief. The pain may occur only on taking food, and vomiting may give speedy relief. It is not an uncommon thing, we know, for young women to produce blood in irregular ways by the mouth, sometimes repeatedly or in quantity, even when all parts are free from disease. If such an appearance should be found, the diagnosis of ulcer becomes almost inevitable. Indeed, blood or no blood, it is often hard to come to an opinion which shall be confident enough to justify us in withholding food on the one hand, or, on the other hand, in pressing stomach-nutrition gently but firmly forward. But according to the correctness of our judgment must our treatment be helpful or positively mischievous. Probabilities do not aid us much, for I think the ulcerous and the pseudo-ulcerous cases are about equally common. The catamenia may be absent or present in either case, nor do I agree with a writer in Quain's Dictionary that gastric neuroses in women especially frequent the catamenial periods. In so far as these act as general depressants of vitality, they may open the way to an attack, as may any other exhaustion; but I do not find among the genuine gastralgics a consensus of cases showing any more direct or any very frequent association of the kind. Emaciation is, perhaps, rather more usual in the neurotic than in the ulcerous disease, but this cannot go for much, nor can chlorotic anæmia, which may be seen in either form. Pain in the back is as common in gastralgia as in ulcer. In these doubtful cases we must try to reach safe ground by a careful review of the patient's life-history, diathesis, and associated symptoms, and we can often attain this position by the discovery of neurotic antecedents, and of some previous irregularities in the now associated symptoms. We shall find, perhaps, that vomiting and pain have been dissociated in the past; that the pain has been nocturnal, or otherwise periodic; that there have been voluminous flatulence, cravings, sinkings, and so forth. With such commemorative symptoms, both as regards stomach and other parts, we may sometimes recognise gastralgia clearly enough, even in spite of the occasional appearance of some ejected blood. Hyperæsthesia of the stomach is not, of course, always, nor even generally, associated with vomiting. Many persons have slighter degrees of such hyperæsthesia, and suffer some discomfort during digestion, either because digestion is slow and defective, or because the stomach resents even a normal digestive process. When such discomfort becomes an ache, the patient calls himself a dyspeptic; when the ache rises into an agony, we have a very grave malady to deal with, even if there be no vomiting nor tendency to vomit. This state of stomach much resembles that of the uterus in the irritable uterus of Gooch, and of the spine in the irritable spine of Teale and the Griffins. It cannot be doubted, I think, that these three maladies, coincident as they often may be with hysteria, are nevertheless essentially independent of it. Irritable spine is found frequently, no doubt, in the plump, listless, and egoistical victim of hysteria; but it occurs likewise in the higher class of neurotics. I am attending such a case of spinal irritation at present, with Mr. Richardson, in Leeds. The young lady is not only cheerful, alert, unselfish, and worn in flesh, but she is full of will and energy in her efforts to carry out any troublesome plan of treatment we may suggest. I take her complaints as literally as I do the complaint of any other sensible and temperate person who says that he is suffering from some unseen distress.[3]

Irritable uterus, again, in spite of the mechanical school, is a genuine neuralgia in many persons, as it may be an affected malady in others. Irritable stomach is a grim reality in no less a number, though hyperæsthesias and anæsthesias, as functional disorders, do, no doubt, belong also to the hysterical; and it may, indeed, be hard to say in a given case where active neurosis ends, and where a brooding persuasion of pain begins. We have types intermediate between the sleek religious woman who knits antimacassars and lives upon her friends, and the hollow-eyed, fiercely active wan woman, who, labouring ever for others, tries to hide the wolf within her, even from herself. Before Laségue and Sir William Gull published their cases of anorexia nervosa I had myself collected six cases, with a view to publication which thereon became unnecessary. For these cases I would deprecate the stereotyped use of the name anorexia hysterica. In some of these cases there is great pain on the ingestion of food; in others there is no pain, but simply a distaste for food. This distaste has arisen in most of them, however, from some discomfort which at one time accompanied digestion—a discomfort which may have taken its rise either in dyspeptic or neurotic causes. Sometimes the distaste has taken its origin in a mere shirking of food—in the fear of growing stout, or in a nobler avoidance of self-indulgence. However established, the distaste, as we know, often becomes invincible, even when eating is unattended with gastric hyperæsthesia. If I were to judge by my own original cases I should fail to see how the word hysterical could usefully be applied to any of them; in three of them the word would be absurdly out of place unless we are to apply it to any nervous malady in any woman whatever. This anorexia nervosa is no whimsical malady, no inconsistent or irregular indisposition, but is a definite complex, consisting in part of objective symptoms. With more constancy than is commonly found in disease, we find the malady as follows. It occurs in young women, and nearly always in those who inherit a decided neurotic taint. Five objective symptoms are always present—namely, amenorrhœa, constipation, subnormal temperature, slow pulse, and cold extremities. To these we may add a degree of emaciation proportionate to that of the malady, and a tendency to loss of hair from the scalp. The first five symptoms are observable long before they would appear as simple results of inanition. In some of these cases, as in Mr. Skey's, the pain which follows the use of food is agonising. I have a case in my mind of the last degree of severity, for her agony on the reception of a cup of lithed broth was extreme. I mean that she would shrink away unnoticed and uncomplaining into any remote corner where she might moan to herself, unconscious of any observation. Now, to this lady, like all the sufferers of this class to which I have referred, the airs and humours of hysteria were wholly alien. Her daily life, even in the days of her weakness, was full of energy and of well-directed good works. Her habits were punctual and methodical, and her affections staunch and wholesome.[4] She never vomited her food, nor have I found vomiting in any cases of anorexia nervosa. The chief variation in the group of symptoms in these patients is in the presence or absence of pain. Pain, so acute in a few, is in most of them absent or insignificant. In the latter exists simply an invincible distaste for food. To yield to such a distaste may seem at first to many high-spirited girls rather a merit than otherwise; it may seem but a distaste for indulgence, a denial of the animal propensities. Thus creeps on unknown or unconsidered an aversion from food, and, indeed, an inability to take full meals, which seems, in some cases, almost unconquerable. If the fear of such a state becomes more prevalent among the public, it is probable that the known results of such mistaken self-denial will serve in future as a timely warning to prevent the full establishment of the distaste.

Hyperæsthesia of the stomach, then, may be found in anorexia nervosa, and to such cases is a grievous addition; in gastralgia of the periodic type, when it may concur with the attacks, or alternate with them, or again, it may itself

[3] I cannot forbear to refer in this place to the admirable service Dr. Handfield Jones has done in warning us against the delusive phrase of "hysterical pain." Dr. Kent Spender offers the same testimony in his work on the Relief of Pain, p. 65.

[4] Laségue notices the briskness and energy of these patients, and gives a very fanciful explanation of them.

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constitute a form of gastralgia, a form in which pain occurs only during digestion. These cases are constantly confounded with dyspepsia; but the term can only be applied to them etymologically. For instance, No. 356, 1878, is a solicitor, aged thirty-one. He called upon me to complain of "grievous indigestion of long standing." Soon after meals pain would come on at the epigastrium, after a time generalising itself about the chest or waist. It would last from one hour to two hours, and it never occurred on an empty stomach, not even if the due hour of a meal were overpassed. Now, this surely seemed due to some defect in the peptic process; and if it were not, how were we to distinguish its cause? Well, his tongue was quite clean, his secretions normal, and he had no offensive flatulence. Nor, again, did he much care what he ate; all things gave him pain alike, except that one thing, beef, which especially tries the neuralgic stomach. But fatigue or annoyance increased his liability to the torment. Sometimes, the pain had given place to a pain in the head, or sometimes it had "pinned him through the body." A year before this stomach-disorder set in, he "was demented with neuralgia in the head," but had suffered thus but little since. Before that, again, he had had a well-marked but brief attack of melancholia; his brother had hay-fever badly, and the family history is neurotic in other respects. Here the gastric pain then seemed to be of the hyperæsthetic form of gastralgia; nor was the diagnosis ultimately difficult unless we are urged to confound it with hysteria. No stomach-medicines could relieve such a patient, and this one was cured with Easton's syrup. In other cases, diagnosis might not be so easy as in his, and in some mixed cases it is very difficult to disentangle the pains which are caused by neurotic hyperæsthesia from the pains which are caused by the presence of products of abnormal digestion. In Miss —— (No. 311, 1879) pain during digestion occurred as in the last case, and there were present also the characteristic nocturnal seizures. Miss —— (No. 31, 1880), suffered in like manner during digestion, but with great severity. It is strange to see that in her case the group of symptoms called anorexia nervosa never arose. She was pallid, emaciated, highly neurotic, and dreaded food. Still her pulse was rather quick, as well as feeble; the catamenia were regular, though scanty and watery; constipation was not well marked; and she manifested no loathing of food, but would gladly have eaten if she had dared. This lady had the abdominal aortic throb, and also, when the pain came on during digestion, her mouth would fill with clear water. It was a great pleasure to me to see this valuable life restored to health and activity after a long illness. A combination of morphia with arsenic and quinine, administered with food, did best service.

In Miss —— (No. 538, 1882) the pain only came on after distinctly improper food, such as tough beef, new bread, sad pastry or cake. Here is a transition towards mal-digestion. But the pain was so intense as to point rather to a neuralgia aroused by peripheral causes, and, moreover, pain was not unfrequently aroused by the same cause in the left orbit, or in the brachial plexus. The three pains might come separately, variously combined in pairs, or all together. This case reminds us of Watson's instance, in which a severe pain in the foot was brought on by eating an ice. I may indicate again the curious fact that such gastralgias may be associated with vomiting, or they may not be. In some cases a tendency to reflex motor spasm is there; in others it is not there. The former cases simulate ulcer, the latter do not, for I presume that vomiting is aroused in all grave cases of ulcer.

Miss ——, aged twenty-two (No. 416, 1883), came under me for intense pain after food, with vomiting and consequent relief. She was sent to me as a case of ulcus ventriculi, and I could not promise her at first that it was not. But her family history was neuralgic, and she used to be "a martyr to tic." Now, "the food makes her so sore and hurts her so," but she is relieved by vomiting. Whether the point be fit for universal application or not, I cannot say; if it be, it is worthy of a pointed reference—namely, that I found warmth always gave relief in her case. I directed her to drink hot water with her dinner, and after a meal to lie down under a rug, with a hot bottle to the epigastrium. This gave her much comfort, but it probably would not have relieved the pain of ulcer. On the other hand, in her, as in many like her, cold feet would precipitate an attack. This lady was completely and quickly cured by anti-neuralgic remedies.

Finally, we must remember, nevertheless, that, in organic disease of the stomach, the pain may be independent of food. Mrs. ——, aged fifty-two (No. 240, 1882), consulted me for pain, which was independent of food, and thus closely simulated simple gastralgia. There was no neurotic history, nor was the pain periodic. She vomited catarrhal matters; but some gastralgics vomit gummy phlegm with their attacks. The diagnosis was very difficult, until progressive emaciation and loss of complexion compelled us to infer the presence of carcinoma, an inference which was but too surely justified by the result.

One symptom very characteristic of gastralgia next demands our attention, and that is flatulence. The flatulence of a typical gastralgia is a portentous thing. Like vomiting, like hyperæsthesia, it may concur with the pain, or come independently of it. It returns often in attacks as the pain does, striving vehemently, so that the concurrence of this wind and gastralgia make up the malady known as "the spasms." That such distensions and belchings as these are of other origin than the mal-digestion of food is, I think, very imperfectly realised by the profession at large. But in its more striking forms its independence of such causes is obvious. It recurs often with the same periodicity as gastralgia itself, and, like it, has a fondness for the small hours of the afternoon or of the early morning, especially of the latter. The patient awakes, let us say, at 2 or 3 A.M., with a sense of distension which he knows but too well. His body is sometimes flat, but more often has swollen about the epigastric region, and become tight and hard. For a while, restless and distressful, he rolls upon his face, and rubs his belly until "the wind begins to move." This, as it does so, rumbles upwards rather than downwards, and delivers itself by no common eructation, but the working load rises in a series of eruptions, which roll from the throat in successive waves of flatuosity. It is a prolonged storm rather than an explosion, and its tumult will keep the patient raised in bed, heaving in strife with it for an hour or two before he finds ease.

Miss ——, aged twenty-three (No. 233, 1883), migraineuse, is liable to violent attacks of flatulence. It awakes her in the night. She has no pain but great distress; wind works upwards in enormous volumes. Her tongue is clean and tremulous, and secretions normal. The gases ejected are innocent of all odour. The uterine functions are normal. It is not stated that this lady ever had gastralgia at all; certainly she had not at the time of my notes. A like state of things existed in a friend of my own, whose mental and bodily activities are incessant, and who has suffered greatly from gastralgia. He had consulted physicians high and low, home and foreign, and his flatulence had invariably been put down to "indigestion," and he was consequently dieted into still further emaciation, and still profounder gastric distress.

Miss ——, aged twenty-nine (No. 374, 1881), has gastralgia well marked, but complains as bitterly of flatulence. This always comes on upon an empty stomach, and is sure to be generated on the delay of any meal. It "rifts up voluminously."

Mr. H—— (No. 629, 1880) has had psoriasis for years. He is subject to attacks of "sinking in the stomach and bowels as if actually dying." He never had pain, but he has "rounds of intense and tremendous flatulence.....always on the empty stomach."

Again, Mr. ——, aged forty-seven (No. 72, 1879), always "delicate," has gastralgia; at present daily. It recurs exactly at 4 P.M., and he hastens to relieve it by food. It is thus postponed till 7 P.M., when it is again put off by dinner. He is thus at rest till 4 A.M., when he is always awakened by "loud noisy and continuous belching, ... with great rollings of wind and most painful distension." He presents no signs of disease anywhere, nor of disordered secretion. He never vomits; he has no discomfort from careful meals, but the reverse. He has had a continuous loss of blood from piles for a long time, and he looks anæmic. This fact he omitted to state until directly questioned, for he believed "that relief to be good for the system," and calculated to clear his "torpid liver." All these people are profoundly convinced that their main enemy is a vicious liver.

I will give but one case more; a solicitor aged thirty (No. 73, 1878), had been very hard worked. First came dull heavy pain in the left side. Then he became subject to "painful distensions of the body, not by food," and extreme flatulence; with this comes on great dyspnœa like spasmodic asthma, or again dizziness so severe that he fears he may fall. He passes profuse and pale urine at such times, and if a woman he would have been written down a hysteric; whereas he is a man of intellect and good sense, and holds successfully a

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high professional position. The only difficulty in his case was to secure for him a sufficient rest. It is to be noted that in all these cases the wind is quite inoffensive. Whether it be carbonic acid, common air, hydrogen, or what else I am unable to say, as I have never tested it. By its mode of occurrence, the suddenness and volume of its generation, as well as in its innocence of taste or odour, it is clearly marked off from the foul wind generated by the fermentations of food. It is certainly produced in some way by the agency of the nervous system. Such are the painful symptoms which may be observed and discussed under the head of gastralgia; but a few yet remain.

There is a distension of the body, real or false, which sadly distresses some patients. Women having this distension must, perhaps, go upstairs to remove the corset to obtain ease. The swelling is for the most part real and measurable; but I am not prepared to say what is the cause or mode of it. That it is a mere accumulation of wind, I hesitate to suppose. It is often unassociated with any consciousness of the presence of flatulence; and, moreover, it is not confined to the region of the stomach. I am assured by many patients, and their observing friends, that it may extend all over the breast, and even to the neck. It may be vascular, but there is no blush with it.

To the horrible, death-like sinkings which belong to gastralgia, though not always actually coincident with the pain, I have already referred incidentally. No. 80, 1874, a male, aged twenty-eight, after a few months' worry began to have neuralgic pain in the left arm and up the neck. After this he became subject to nocturnal attacks of "want"—not a craving, or exactly a faintness, but "an awful emptiness, with a dread at the heart." He was substantially quite healthy, and was soon cured on restorative and tonic treatment. I am now seeing a similar case in Leeds, with Mr. Robson, in a neurotic subject. Vertigo is sometimes associated with this symptom. Slighter degrees of this distress often accompany gastralgia or enteralgia, or, with an unaccountable languor, precede them. These subjective sensations are, of course, to be distinguished from the collapse, sometimes alarming in its degree, which is consequent upon the intenser attacks of abdominal neuralgia. The intensity, indeed, of most severe cases of gastro-enteralgia may be seen in the ashen cold face and blue nails. Finally, most gastralgics are subject, not when actually suffering only, but also at all times, to borborygmi. Few people are ignorant of this phenomenon; but it is in neurotics especially that it reaches its most lively and garrulous form. An old and valued domestic, who has recently retired after twenty-five years of household service, and who presented all the phenomena of gastralgia in an active form, was so embarrassed by these audible internal questionings that she almost withdrew herself from waiting at table. In some persons, borborygmi are rhythmical, and coincide with the inspiration. The noise is then rather of a churning character, and, I believe, is made in the stomach only. On examination, it will be found that in these persons the breathing, when full, is wholly abdominal. Even in women the thorax may be motionless. In addition to tonic measures, gentle dumb-bell exercises are most potent to remove this disorder.

And now, gentlemen, have I succeeded in enforcing that which you already knew—namely, that all the symptoms I have discussed to-day form, not only a consistent, but a very uniform series? Few maladies present a more definite series, or one more capable of rational explanation. Is it not one of the last maladies to be classed with those of irregular, capricious, and fanciful evolution? Shall we then say, as the authors of our text-books do to this moment, that gastralgia is for the most part a malady of hysterical women? If we still say so, then it is indeed time for the lion to paint the man.

WESTMINSTER SCHOOL FOR NURSES.—The new building in connexion with this institution was opened on the 19th inst. by the Prince of Wales, who was accompanied by the Princess of Wales. The institution, founded ten years ago, has now been placed upon a permanent footing. The new home will accommodate fifty nurses. The committee also hope to establish some district nurses among the poor of Westminster. The cost of the site, including all expenses, is £4939, which has been paid, but £4000 is required for the remaining expenses of erection and for furnishing.

ON AN OPERATION FOR THE CORRECTION OF SECONDARY DIVERGENT STRABISMUS.

BY JOHN TWEEDY, F.R.C.S. ENG.,
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OF the various forms of squint perhaps none is so disadvantageous to the patient or so troublesome to the surgeon as the divergence that occasionally follows tenotomy of the internal rectus for the correction of convergent strabismus. Not only does the outward position of the cornea give to the countenance a peculiarly sinister expression, but the backward displacement of the insertion of the internal rectus muscle renders rotation of the eyeball inwards painful, and perhaps altogether impossible. Binocular vision is no longer attainable, and the sight of the deviating eye steadily declines, till eventually it is practically lost. Hence, the importance of restoring the parallelism of the visual axes as early as possible.

Whenever an eye begins to deviate outwards after tenotomy of the internal rectus, it is certain that there has been what is called "too free division"—not, of course, of the tendon, but of the muscular substance, or of the capsule of Tenon. Formerly this mishap seems to have occurred more frequently than it does in these days, though I suspect the immunity of later times is due rather to good luck than good management. So long as surgeons aim at correcting convergent strabismus offhand by tenotomy alone, cases of secondary divergence will occur. In operations for squint the *rationale* of tenotomy seems to be commonly ignored. The *modus operandi* of tenotomy for remedying other deformities, say club-foot, is not to divide the tendon and then straightway to put the foot in its proper position, but to leave it for awhile in its abnormal situation until reparative material has formed between the ends of the divided tendon. Correction is then accomplished by stretching the soft reparative material and thereby elongating the tendon. In operating for squint, on the other hand, both the surgeon and the patient seem bent on immediate rectification of the deformity, and are extremely elated when this is attained. The tendon and adjacent capsule are freely and extensively divided, and then the muscle being liberated from counter-extension contracts vigorously, so that the severed tendon acquires a new attachment far back and behind the centre of movement of the eyeball. Ever afterwards it works at a mechanical disadvantage, and sooner or later exhibits the painful and ineffectual efforts of insufficiency. When the eye is "straight" immediately after tenotomy, it is hailed as "a brilliant success." It is, however, these "brilliant successes" that furnish the largest quota of cases of secondary divergence.

In ordinary non-paralytic squint, when operative measures are called for, it is sufficient to tenotomise the contracted or shortened muscle only—that is, the muscle on that side to which the cornea inclines. In secondary divergence, however, division of the external rectus is not enough. For the reason I have already mentioned, it is necessary, in addition, to bring forward the retracted tendon of the internal rectus and attach it to the sclerotic in front of a line passing through the centre of rotation of the eyeball. This proceeding is called Readjustment, and is at once cosmetic and plastic in character.

Many modes of performing readjustment have been suggested. In this country it is, I believe, usual to employ that which was originally designed by the late Mr. Critchett. It is accomplished in the following way:—

First, the tendon of the external rectus is divided subconjunctivally, and then a vertical cut is made with a pair of scissors through the conjunctiva and deep fascia in a line corresponding with the inner margin of the cornea, but at one line and a half to two lines from it. With a few snips the conjunctiva and subjacent fascia are separated from the inner side of the globe as far back as the caruncle, care being taken in doing this to divide the new insertion of the internal rectus so that in drawing the tissues which have been thus detached from the globe the tendon will be raised with them. A vertical slip of the conjunctiva and fascia is then cut away, and the edges of the wound are brought together

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with sutures. Three threads are required, the centre one being inserted first; it is passed through the slip of conjunctiva which was left at the edge of the cornea, and then through the deep fascia and conjunctiva close to the caruncle. The upper and lower stitches are then put in and tied.[1]

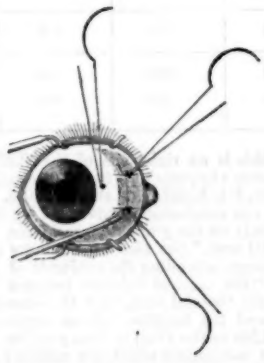
I have never attempted readjustment by the Critchett method, because, so far as I have had opportunity of judging it as performed by others, it seems somewhat haphazard in its processes, and not very satisfactory in its results. I doubt not that in many instances it has been perfectly successful. I speak only of the cases I have myself witnessed; of four such only one could be said to be perfect; of the remaining three one had a prominent hard cicatricial band in the conjunctiva, another had permanent displacement upwards and outwards of the cornea from rotation, and in the third there was absolute immobility of the globe from cellulitis of the orbit following the operation. The faults of the method are threefold: first, the primary division of the external rectus favours rotation and other disadvantageous displacements of the globe, which are further increased when the internal rectus is cut through; second, the internal rectus is divided without any precaution being taken to establish its identity, so that when in the later stages of the operation it is sought to affix the sutures there is no certainty that what is secured is solely or wholly muscle, or even muscle at all; and third, there is an unnecessary amount of exposure of the internal rectus muscle and orbital cellular tissue.

Impressed with the many defects of this operation, I began to think of how they might be avoided. At length the plan described below suggested itself. Five years and a half ago I put it in practice for the first time, and since then I have repeated it about fifteen times. Speaking generally, the processes of my method are exactly the reverse of those of the late Mr. Critchett's. What he did first I do last, and what he did last I do first. There are, however, other differences, as will be observed in the following description, whereby greater certainty and security are obtained with less risk.

The operation, then, consists of ten stages, as follows:—

1. The lids being kept apart with a speculum, a fine silk thread is inserted into the conjunctiva and episcleral tissue, in a line with the horizontal diameter of the cornea, and about one-sixteenth of an inch from the inner margin of the cornea. The ends of the thread are left long with the needle attached (see Fig. 1). (The preliminary insertion of

FIG.



this thread marks, and afterwards indicates, the horizontal meridian of the eyeball, and still later serves as a suture for the middle of the rectus muscle.)

2. Next, a crescentic incision is made immediately to the nasal side of the thread and through the conjunctiva only.

3. The conjunctiva is then gently detached from the underlying capsule towards the caruncle, but only far enough to expose the insertion of the rectus muscle; not to strip the muscle.

4. A strabismus hook is then passed under the muscle.

5. While the hook is in position fine silk threads are attached to the upper and lower borders of the muscle and left long (see Fig. 1).

[1] Lawson: Diseases and Injuries of the Eye, fourth edition, p. 262.

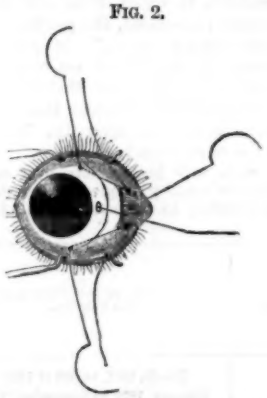
6. The hold of the threads having been tested by gentle traction, the muscle is divided on the hook. (The operator is now sure that he has secured the tendon.)

7. The muscle is then carefully raised by means of the threads, and any remaining attachments of the muscle to the globe completely divided.

8. The needle attached to the thread at the inner border of the cornea is passed through the middle of the divided muscle from within outwards, and in such a way as to penetrate the muscle and its sheath and overlying conjunctiva. (By including the sheath and conjunctiva, not only is a firmer attachment obtained, but the relations of the muscle and its sheath are as far as possible preserved, at the same time that the sunken caruncle is raised by bringing the conjunctiva forwards.)

9. The needles attached to the threads at the upper and lower borders of the muscle are now insinuated into the episcleral tissue, and made to emerge on the surface of the conjunctiva at about one-eighth of an inch from the upper and lower margins of the cornea respectively (see Fig. 2). This gives a broad and fan-like attachment to the muscle.

FIG. 2.



10. The external rectus is now freely divided subconjunctivally, and then, while an assistant rotates the eyeball inwards, the corresponding ends of the three sutures are closely and firmly tied and cut short.

Should shortening of the internal rectus muscle or removal of redundant conjunctiva be deemed necessary, it may be done just before the ninth stage. I have, however, only once found it necessary to abscise any muscular substance. As a rule the muscle is already short enough; it only needs its attachments to be brought forward. To ensure a complete and permanent result, there should be some convergence of the eye immediately after the operation, and no attempt should be made to exercise the muscle for a week afterwards. The dressing and after-treatment are simple. After washing the lids with a weak solution of boracic acid or of chloride of sodium (about 1 per cent.), I apply to the closed lids a piece of lint on which a thin layer of boracic acid ointment (gr. 20 ad ℥1) has been spread, and then tie up the eye with a light compress of cotton-wool. The bathing and the compresses are renewed once or twice a day for five or six days. The stitches are removed on the fourth or fifth day if they do not fall of themselves.

Harley-street, W.

FATALITY AT LEICESTER COUNTY LUNATIC ASYLUM.

At the post-mortem examination of the body of a lunatic who recently died at this institution, it was discovered that four of the right ribs and one of the left were broken, the latter having an abscess behind it. No information could be obtained as to how the injuries were inflicted. Further inquiries being instituted, an attendant recollected that a scuffle had taken place between the deceased and another patient, named Burrows, about three weeks previously. During the struggle Burrows and a heavy fire-guard fell on the deceased, who fainted and lay on the floor some time. The attendant did not report the circumstance, and forgot all about it. The jury returned a verdict that deceased died from injuries accidentally caused by Burrows and the fire-guard falling upon him

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ON THE

INFLUENCE OF SMALL-POX HOSPITALS.

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PHYSICIAN TO THE CHELTENHAM GENERAL HOSPITAL.

No. III.

THE special incidence of small-pox in the neighbourhood of the Asylums Hospitals in London is held by the Royal Commission to have been proved by statistics brought before them in the course of their inquiry. They distinctly assert, however (at page 23 of their report), that the wider view which they were enabled to take of "the deleterious influences from which London suffers" had convinced them that "a healthy neighbourhood in which a hospital has been planted, though to a certain extent injured, may yet be favourably compared, as regards prevalence of small-pox, with those localities in which, from over-population and neglect of sanitary precautions, the predisposing causes of disease are more deeply seated." It may be taken for granted, therefore, although this is not brought out by any of the figures in Mr. Power's report, that there was a special incidence of the disease round Fulham Hospital in 1881, and to a less extent in the previous epidemics. What conclusions can we come to as to its cause?

Mr. Power, as is well known, has, over and above the ordinary methods of small-pox spread, suggested one which is even more startling to the sanitary mind than is the suggestion of particulate matter from Sumatra, or even from the meteoric regions in space to account for sunsets and afterglows of unwonted beauty. Believing "that the machinery of the hospital administration, with inclusion of defects in that machinery, does not account for the peculiarity of small-pox incidence within the three parishes, Chelsea, Fulham, and Kensington since the establishment of the hospital," he examines and finally adopts the hypothesis, already suggested by popular opinion, "of direct atmospheric agency as the means whereby small-pox communicates its infection to even distant places," how distant we shall presently have to consider. The statistics which have led Mr. Power to this opinion appear to a superficial observer so neat and precise as to leave no room for discussion. If a circle with one-mile radius be drawn round a small-pox hospital as a centre, and the area so enclosed be further subdivided by circles drawn round the same centre, with diameters of a quarter of a mile, half a mile, and three-quarters of a mile respectively, and it be found that the incidence of small-pox during epidemic periods in these several circles diminishes in direct proportion to their distance from the hospital, that there is "a graduated intensity from centre to periphery," the atmospheric theory comes in as a *deus ex machinâ* to account for the *tertium quid*, unaccounted for by either the ordinary spread from house to house common to the whole metropolis, or by defects in the hospital machinery. But we had better give Mr. Power's table as it stands in his report, adding merely from the Hospitals Commission Report, p. 383, the number of houses in each division of the "special area," and the number of those invaded within the four years embraced in the inquiry (see Table).

The figures as presented are undoubtedly striking, but before any reliable inferences can be drawn from them we must be sure that the areas here compared are really comparable—(1) As regards the number, density, and distribution of houses; (2) as regards the number, density, and distribution of the inhabitants; (3) as regards the social status; and (4) as regards the protected or unprotected state of the population. Discrepancy in any one of these particulars might suffice to upset the whole calculation, yet we find that under Mr. Power's rigid use of the statistical method a house is a house whether it contain one family or half a dozen, whether its inmates are poor or rich, and the rings in his "special area" are treated as if they differed no more than pieces on a draught board, whereas the most superficial inquiry is sufficient to show that probably in every one of the points indicated the areas of Mr. Power's inquiry differ materially from one another. We learn from Dr. Dudfield's Report, 1882, p. 54, that the quarter-mile circle nearest the hospital contains "only 432 houses, occupied to a considerable extent by the poorer classes, while in the three rings counting from within outwards, there are 3488, 4224, and 3569 houses respectively, occupied for the most part in Kensington, at least, by well-to-do people, the outer ring moreover being, to a considerable extent, uncovered by buildings. During the three months covered by Mr. Power's inquiry small-pox appeared in thirteen houses only within the inner circle, but these count for 3 per cent., whereas in the first of the outer rings fifty-four houses, or four times as many, were invaded, but these only count for 1·54 per cent, or just half the percentage in the inner circle."

Cases of acute small-pox admitted to Fulham Hospital.	In epidemic periods since opening the hospital.	Incidence on every 100 houses within "the special area" and its divisions.				
		On total special area.	On circle, 0 to ¼ mile.	On 1st ring, ¼ to ½ mile.	On 2nd ring, ½ to ¾ mile.	On 3rd ring, ¾ to 1 mile.
327	March, 1877, to end of 1877	1·10	3·47	1·37	1·27	0·36
714	January, 1878, to September, 1878	1·80	4·62	2·55	1·84	0·67
679	September, 1878, to October, 1879	1·68	4·40	2·63	1·49	0·64
202	October, 1879, to December, 1880	0·58	1·85	1·06	0·30	0·28
515	December, 1880, to April, 1881	1·21	3·00	1·54	1·25	0·61
2527	Five periods	6·37	17·35	9·20	6·16	2·57
Houses in "the special area"		11,713	432	3448	4224	3569
Number of houses in which small-pox appeared in four years (5 epidemics)		748	75	320	261	92

Assuredly this is no right use of the statistical method, and if Mr. Power's hypothesis is to rest on conclusions derived from this table, it is founded on shifting sand. But we shall be told that the conclusions arrived at by Mr. Power are based not merely on the graduated incidence of the disease in the "special area," but also on a minute examination of the circumstances attending the epidemic of 1881, such, for instance, as "the marked relation between the aggregate incidence on the 'special area,' and the amount of hospital operations," and the facilities offered during the infective period (Jan. 12th to the 17th) in that year for the quiet dissemination of particulate small-pox matter in all directions from the hospital as a centre. To the first of these I have already drawn attention in the preceding papers—showing the insignificant number of acute cases, under twenty on any single day, and these varying in severity—which were, in the words of Mr. Power, "charging the air of the hospital with abundance of infection in an active state," during the infective period in question; it is worth noting also that while "ten, or at any rate less than twenty, acute cases in January could lead to a notable outburst," over an area of 3¼ square miles at the commencement of an epidemic, no mischief was wrought in Kensington in the following August with an average of nearly twenty acute (low diet) cases daily in the hospital; the weekly number of cases south of Kensington-road in a population of 80,000 averaging less than two, and not one of these cases occurred in Ifield-road, the street nearest the hospital.[1]

[1] See Dr. Dudfield's Report, 1882, p. 61.

The second point, of atmospheric fitness during the infective days for diffusion of a hypothetic cloud of particulate small-pox infection in every direction from the hospital, may seem to fit in well with Mr. Power's general theory, but it loses very much of its significance when we learn from Dr. Dudfield that in a parallel outburst in April, 1878, "thirty cases were admitted into Fulham Hospital from Kensington, mostly from the special area, in six days (April 15th to 20th), in addition to twenty-seven admitted from Chelsea and Fulham, and irrespective of home cases." In this outburst, which happened when the epidemic was at its height, the atmospheric conditions on the infective days (March 30th to April 4th) were a decided contrast to those so insisted upon by Mr. Power. "The mean temperature (40° F.) was below the average, but it was 18° higher than in January, 1881; and the atmosphere was clear, not foggy; the air was not still, for the horizontal movement on an average was ninety miles per day in excess, the general direction of the wind being south-west; lastly, ozone was present in the air."

The difficulties of accepting the conclusions arrived at by Mr. Power will not be lessened when we examine the surroundings of the hospital to which such far-reaching and mischievous effects are attributed. Those who know the situation of Fulham Hospital will readily accept Mr. Power's description of it as "singularly well separated from neighbouring houses of its district, and so placed that few of its neighbours but those having business at the hospital had need to go near the building. Bounded on the north by the Lillie Bridge running grounds, some 700 by 450 feet in extent, on the south by a strip of market garden and the grounds of the London Athletic Club, even larger than the Lillie Bridge grounds; on the east by a cutting of the West London and District Railways, and beyond that by Brompton Cemetery, 200 yards broad, and on the west by market gardens or open uncultivated ground, the number of existing dwellings within 500 feet of the hospital boundary is trivial, whilst the nearest houses to the east are at a minimum distance of 800 feet, and it is from this place as a centre Mr. Power would have us believe that small-pox matter spreads under certain circumstances to a distance of one and a half or even two miles, with power to infect susceptible persons in the direct ratio of their proximity to the hospital. But no argument from antecedent improbability can avail us here; for if Mr. Power's interpretation of facts is correct, there is no choice but to accept his conclusions and to act upon them decisively. We have seen, however, that there are difficulties, neither few nor small, in the way of such acceptance. Some of these have been already stated, but more remain.

It is certainly remarkable, and seems to require explanation, that the infective influence supposed by Mr. Power to emanate from Fulham Hospital should commence its operations at a distance of 800 feet, whereas at Stockwell "the sickness.....appears to have been intensified within 200 yards of the hospital, but, as far as the returns show, not sensibly beyond that limit"[2]; and Dr. Tripe, medical officer of health for Hackney, and a partial convert to the theory of aerial dissemination, is of opinion that "if you put 500 or 600 patients on one site the infection may spread 600 or 700 feet, whereas there is evidence to show that if you have small hospitals (surely Fulham, with twenty acute cases at most, from Jan. 12th to 17th, 1881, would come under this category), and especially small wards, 150 feet would be sufficient."[3] Again, considering the intense infectiousness of small-pox, we should naturally expect that such a shower of particulate small-pox matter, of exceptional intensity and potency, as was, according to Mr. Power's hypothesis, wafted "in still, sometimes foggy weather, with occasional light airs from nearly all points of the compass," from Jan. 12th to 17th, 1881, would infect once for all such susceptible persons as might happen to be in the "special area" during that period.[4] Yet we find that in the fortnight ending Feb. 5th forty-one fresh houses were invaded, seven within the quarter-mile circle. But it does not end there; from Feb. 6th to 19th there were twenty-one fresh invasions, and in the succeeding fortnights ending March 5th and 19th, and April 2nd, twenty-four, twenty-four, and twenty-five fresh invasions within the "special area."

[2] Report of the Hospitals Commission, p. xix.
[3] Report of the Hospitals Commission, Q. 2212.
[4] "It attacks at once all susceptible persons immediately on their exposure to it; where it strikes it strikes at once."—Paper read before the Society of Medical Officers of Health by Dr. Collie, May 21st, 1880. Cf. also note by Mr. Power, Hospitals Report, p. 369: "The disease is capable beyond others of infecting susceptible persons after the briefest exposure to its contagion."

Again, with conditions such as Mr. Power describes for "the quiet dissemination of matters contained in the air, and for the deposit, perhaps, of any that were particulate," we should expect to find "the incidence of small-pox upon houses coincident with this distribution of aerially contained matters to be almost the same in all directions from the hospital as a centre." Mr. Power says he found it so. I would, however, appeal to the evidence of Mr. Power's own map in contradiction of this statement; an unbiased examination of that map will show that the distribution of cases was by no means the same in all directions—they largely preponderate to the eastward (the great highway already noticed), where three ominous blue dots are largely suggestive of the source from which they derived their origin—for they mark cases which occurred from Dec. 25th, 1880, to Jan. 17th, 1881, at or about which latter date the victims of Mr. Power's "outburst" received their infection. It would be interesting to know how many of the cases in the map, whether marked by red or blue dots, had been treated at home and so had become the nuclei of subsequent invasions. The extent to which this may be the case is well illustrated in a most instructive and interesting paper by Dr. Seaton of Nottingham, entitled "On the Influence of Small-pox Hospitals,"[5] where the home treated cases are clearly shown to be the centres of subsequent spread. The exemption of Adrian-mews also, as pointed out by Mr. Sweeting,[6] is remarkable, there having been no case there in 1881, though it occupies the centre of Ifield-road on the cemetery side; and in Seagrave-road, Ricketts-street, St. Oswald's-road, Merrington-road, and Hildyard-road, all nearer even than Ifield-road to the hospital, and occupied by a poorer population, there was but one case during Mr. Power's "outburst," Jan. 26th–30th, 1881, and but six cases in four houses during the whole year.

But the evidence of Dr. Dudfield[7] on the incidence of small-pox in Ifield-road during the year 1881, if considered in all its bearings, presents in their strongest light the difficulties of accepting Mr. Power's aerial theory of infection. Ifield-road is one of the nearest to the hospital, being 800 feet only removed from it at its nearest point, and separated by the Brompton Cemetery. It contained a population of some 2000 people, crowded, and mostly of the poorer classes, and formed practically the inner or quarter-mile circle. Here surely was the field in which such an outburst as Mr. Power describes should have shown itself in a very marked manner; yet in this street there were four cases only in the fortnight ending Feb. 5th (the date of Mr. Power's "outburst"), two in each week. There were forty-one cases during the epidemic, spread pretty evenly over the months from Jan. 29th to July 23rd, the weekly numbers never exceeding three, save on two occasions (the weeks ending April 2nd and July 16th), when there were six. Of these forty-one cases, fifteen occurred in twelve houses out of the ninety on the west side of the street nearest the hospital, and twenty-six cases in fourteen houses out of the sixty-five on the east side furthest from the hospital, whilst Finborough-road, with its 187 houses partly at the back of Ifield-road and partly continuous with it, showed an immunity very remarkable on the aerial theory, for there were six cases only in five houses, two being gentlemen in separate houses, engaged in the City, an actress, a domestic servant, and two children (consecutive cases) immediately in the rear of an infected house in Ifield-road. The distribution of cases, also, as shown in Dr. Dudfield's map, is strongly indicative of a spread from house to house rather than any common infective origin. Of the twelve infected houses on the hospital side six were *vis-à-vis* to six infected houses on the east side, and two others were nearly opposite, while of fourteen infected houses on the east side six were opposite and five nearly opposite infected houses on the west side, but with two exceptions there was no such correspondence of invasion dates as would lead to a suspicion of a community of origin.[8] The actual spread, as traced with much difficulty by Dr. Dudfield, is also worthy of study, showing the often unsuspected channels by which the poison is conveyed. The first case was on Jan. 25th, at No. 96, source unknown. The next, in all probability, was a case supposed to be chicken-pox at No. 79, from which an inmate caught the disease on Feb. 16th, and infected two others in the same house on March 4th, and a lodger on March 6th. Three out of four were thus traced to a single case.

[5] Transactions of the Epidemiological Society of London, N.S., vol. ii.
[6] Hospital Commission, Q. 5251. [7] Hospital Commission.
[8] Cf. Hospital Commission, p. 361.

The second group commenced with a woman on April 8th, at No. 11; on April 23rd a child who had slept with her grandmother (the case at No. 11) showed the disease at No. 51, and on May 8th two further cases appeared in a brother of this child and a female lodger in the same house, again three out of four arising in a single source. Group 3 began with a gravedigger living at No. 5, who went to the hospital on April 3rd and was discharged on April 30th, with scales still on his skin and went to lodge with his sister at No. 91. Early in May a neglected case occurred in a boy at No. 91, and on June 9th, 10th, and 13th, in the same house three boys were attacked (they had also had communication with a case at No. 72 on May 23rd, the day the patient went to the hospital.) From No. 91 it was further spread by direct communication to the son of an anti-vaccinationist at No. 73, who fell ill on January 19th and was kept at home three weeks. The father also at No. 73 fell ill on July 5th, the mother (who was treated at home) on July 10th, and another son on the same day. Here eight cases were clearly traced to a first infection. Of the whole number, forty-one, Dr. Dudfield accounted with more or less probability for twenty-six, leaving a residuum of fifteen only for the operation of aerial infection *plus* untraced opportunities for personal intercourse and contact. In Mr. Power's own investigations as to the thirty-two persons attacked within "the special area" (Jan. 26th to the 30th, 1881), the residuum was twenty-three. Thus far I have dwelt with the positive evidence on which Mr. Power relies for the establishment of his theory of aerial infection over a distance of a mile or a mile and a half. Taking the facts as they stand, there seems good reason for doubting the conclusions drawn by Mr. Power from his table showing "a graduated intensity from centre to periphery," and for giving a different interpretation to the facts which have been brought forward in its support. It has been shown that epidemics of small-pox in the Fulham district follow no private rule of their own, but are amenable to the wider laws governing the accessions and recessions of the disease over the whole metropolis. The incidence of cases also immediately around the hospital, both as regards time and locality, has not been found to fit in with Mr. Power's theory of particulate infectious matter wafted gently through the air; nor have the accessions and recessions been found to correspond in any sense with the numbers of acute cases in the hospital ward. Whether the residual cases without apparent cause are too many to be accounted for by the ordinary channels of small-pox infection must remain for consideration in my next paper, in which I hope to deal also with the negative evidence bearing on Mr. Power's theory, and our present knowledge of the spread of small-pox infection through the open air.

A DESCRIPTION OF THE

METHODS OF PERFORMING THE NOW RECOGNISED OPERATIONS ON THE KIDNEY.

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(*Concluded from page 466.*)

NEPHRORRAPHY

was first performed by Dr. E. Hahn, of Berlin; and the experience of others, including that of the author of this article, had quite prepared them to accept some such operation as a distinct step in the treatment of wandering kidney. It is practised in cases of floating, movable, or wandering kidney, in which the organ, besides being mobile, is the seat of frequent severe and spasmodic attacks of pain; or of more or less continuous suffering. It consists in fixing the kidney in the loin; and is performed by exposing the kidney through an incision in the loin, such as that described for nephrotomy or nephrolithotomy. This done, a strong catgut suture should be passed through the renal capsule and the edge of the parietal wound. By tightening and knotting the suture the kidney is fixed back against the lumbar parietes. The wound should be stuffed with carbolised gauze or boracic lint, and left to heal by granulations. The operation has been performed several times, and with almost uniform success. In one case, however, Gilmore found that the suture cut its way out of the kidney and set the viscus once more free; he afterwards successfully removed the kidney by lumbar nephrectomy. Dr. Robert T. Weir, in fixing the kidney of a woman aged thirty-three, cut along the outer edge of the quadratus lumborum, from the last rib to the iliac crest, thus making a vertical instead of an oblique incision, and stitched the perirenal fat to the edge of the external wound, leaving the wound open to fill up by granulations. The patient did well, and was greatly improved by the operation. Hahn also made the vertical incision, and in his first two cases he simply stitched the perirenal adipose tissue to the parietal wound by eight or ten catgut sutures, but as in one of them the result was not quite satisfactory, he passed the catgut suture in his third case through the renal capsule. Hahn advises that the kidney should be fixed as low down as possible, so as to obviate the effects of dragging when the patient resumes the upright posture. Experience will have to decide whether there is any necessity for penetrating the kidney envelope. Gilmore's case shows that the same want of success may follow from the kidney suture as from the perirenal one. Indeed, though a suture seems to give an extra chance of success, and adds but little extra risk to the lumbar incision, it is not yet adequately proved that any suture is requisite to attain the end in view. Before knowing of Dr. Hahn's paper I had advocated the lumbar incision alone as a probable cure for movable kidney, and I attributed the relief which followed in a case I had explored to the retention of the kidney in its place by the contraction and adhesion resulting from the wound. Of course, no operation should be undertaken for floating kidney until pads and belts and corsets for steadying the kidney, and electricity, massage, and sea-baths to increase the tone of the abdominal parietes, have been tried and failed; but fail in severe cases they almost certainly will. The dangers of nephrorraphy are the same as those of nephrolithotomy, except that there is little or no hæmorrhage from the kidney by the introduction of the suture.

NEPHRECTOMY,

or the removal of the kidney from the living body, was first performed as a planned operation in the human subject by Gustav Simon, of Heidelberg, in April, 1869.

Blundel,[1] years ago, performed nephrectomy on the rabbit, and proved that in rabbits, at least, the kidney might be removed without causing death. Three different surgeons had preceded Simon in excising the human kidney, but without knowing the nature of the tumours they had to deal with, until the operations had been partly completed; the first of these was performed in 1861, the others in 1867 and 1868; the ventral method was employed in each; all the patients died. Simon's case was the fourth in which nephrectomy was performed, and the first in which the lumbar method was adopted. The patient recovered, and from that time the operation has been recognised as a legitimate one.

Lumbar Nephrectomy should be performed in cases in which the removal of a disorganised kidney is advisable after nephrotomy has been tried and failed to improve the condition of the patient; in cases of nephrolithiasis for which nephrolithotomy is not practicable; in cases of uretral urinary fistulæ; in cases of wounded or ruptured kidney which are injured past the probability of functional repair, or in which blood-clots are being forced into the ureter and plug it so as to lead to urinary extravasation into the loin or to acute nephritis of the injured organ, and threatened implication of the peritoneum. It should also be selected for cases of renal cystic tumours, and small or medium-sized solid tumours of the kidney, and for some cases of painful movable kidneys which are condemned to removal. Other cases of large tumours, and of wandering kidneys very loosely held by a mesonephron, are better dealt with by the abdominal method. But here I would emphatically endorse the teaching of Simon, who laid it down as a cardinal principle that extirpation of a kidney is only permissible when a patient's life is seriously threatened by disease, and all other remedies have failed, because renal disease is more dangerous in persons with only one kidney.

The suffering caused by a floating kidney ought, therefore, to be quite unrelievable by other means before the patient is exposed to the great risks—operative and prospective—of nephrectomy; and in renal calculus no pains should be

[1] On the Surgery of the Abdomen. See Ashwell, 1823.

spared to procure relief by nephrolithotomy before proceeding to the much graver operation of excision. Rayer and Moseler tabulated fourteen fatal unirenal cases; in seven death was sudden, and due to obstructed ureter and anuria; and in nine there was renal calculus.

It is probable that future experience will exclude from the category of causes for which nephrectomy, by any method, should be done, tubercular disease, and renal sarcoma in children, as well as cancer at any period of life. In cancerous tumours it is not likely that life can be much prolonged, unless in the exceptional cases in which the disease is detected before it has existed long, or affected the lymphatic system. In tuberculosis, which when it affects the genito-urinary tract rarely confines itself to one organ, much temporary relief may be given by nephrotomy; but nephrectomy is only advisable, and safe from the special danger of anuria, in very exceptional instances. Here all will depend upon the character of the urine secreted by the other kidney, a point most difficult to determine. The best guides are—1. The normal character of the urine as to absolute quantity and percentage of the excreted solids; the excretion of urea being the chiefest. 2. The absence of albumen over and above what is explained by the pus in the urine. 3. The urine should have an acid reaction. 4. The absence of vomiting; vomiting, as pointed out by Dr. Barlow, being often a distressing symptom when both kidneys are diseased. Mr. Davy informs me that the last application of his rectal lever has been the compression of one ureter to ascertain the condition of the excretion of the opposite kidney. Methods of catheterising the ureter have been proposed, but are not, I think, of any practical utility.

In speaking of tuberculosis of the kidney, a distinction ought to be made between it and strumous pyelitis. In the latter there is less tendency for the disease to spread along the ureter and affect more than one part of the genito-urinary organs; and the disease chiefly affects the calyces of the kidney, whereas tubercle commences in the cortex and passes downwards.

The advantages of lumbar operation are twofold—(1) the peritoneum is not opened, and (2) the wound permits of excellent drainage. It is performed most easily by the transverse, or slightly oblique incision, as in nephrotomy, and made somewhat nearer the last rib than in lumbar colotomy; with this should be conjoined a second incision, running vertically downwards from the first, and starting from it about one inch in front of its posterior extremity. In making the first incision, which should be about four and a half inches in length, the operator must not go nearer than half an inch of the twelfth rib, for fear of wounding the pleura, which sometimes descends a little below it. The second incision may be left until the kidney has been reached and explored, and it can then be made by cutting from within outwards with a probe-ended bistoury, steadied by the index-finger of the left hand. One great advantage of the vertical incision is the increased facility it affords for passing the ligatures around the pedicle. Other incisions have, however, been employed. Simon originally adopted the vertical; Klineberger, a curved incision, having its convexity upwards and outwards; and several surgeons have used the ordinary lumbar colotomy incision alone. Lucas, in an excellent digest of the surgical diseases of the kidney, recommends an oblique incision, half an inch below and parallel with the last rib, "and a vertical incision along the outer edge of the quadratus lumborum, commencing at the upper edge of the last rib, and extending to the iliac crest,"[2] but the upper end of such an incision is in dangerous proximity to the pleura, which would in some subjects be wounded by it.

The kidney being reached, the next step is to separate it from its surroundings. When no perirenal inflammation has existed, the colon, peritoneum, and fatty tissue will easily be detached from their connexion with the kidney by the index-finger of one hand, worked close against the capsule of the organ. It will generally, I think, be found that even when no inflammation has occurred some of the renal capsule will be torn off and left behind; in other cases, as when the operation is performed for calculous or scrofulous pyonephrosis, and as a subsequent proceeding to nephrotomy, the kidney should be enucleated from its thickened and adherent capsule, and the latter left behind with the pedicle. The next step is to pass a double ligature of plaited silk through the pedicle, between the ureter and the vessels. This is done by means of an aneurism needle, fixed in a long handle, whilst the kidney is dragged well up into the wound by the left hand of the operator, one of the fingers of which can at the same time be acting as a guide for the needle. The needle passed and withdrawn, the ligature silk should be divided, and one-half of it should be tied tightly around the vessels and the other half around the ureter. In doing this the ligatures should be pressed well inwards towards the front of the spine, so as to leave plenty of room between them and the hilus for dividing the pedicle. The kidney should now be drawn quite out of the wound, a proceeding which is sometimes very difficult, but which will be greatly facilitated by dragging the lower ribs forcibly upwards with the fingers of the left hand dipped into the wound.[3] Another ligature should be thrown round the whole of the pedicle, and securely and tightly tied before cutting the kidney free, which is now safely done by snipping through the ureter and vessels with a pair of blunt-ended scissors.

Any bleeding points should at once be seized and ligatured or twisted; and it is very probable that when the wound comes to be fairly looked into, as it can after the kidney is cut away, some moderate-sized vessel will be found bleeding. Some aberrant branch of the renal, or one of the inferior supra-renal arteries, or the branch to the upper end of the ureter or to the connective tissue of the loin, all branches from the renal trunk, or one of the parietal branches of the aorta, may require control.

All the ligatures should be cut off short, and the pedicle dropped into the wound. A drainage-tube should be fixed in the wound, the edges brought together with waxed silk or fishing-gut sutures, and the form of dressing commonly employed for fresh wounds by the particular operator should be applied. The patient should be kept in the recumbent position until healing is complete, and the drainage should be kept up for four or five days. Healing is, as a rule, rapid, though the drainage track will require from three to four weeks to close perfectly, and it is well that during all this time complete quietude should be observed and great care given to the diet, so that the other kidney may not be irritated by too great concentration of urine secreted by it. Some surgeons attach importance to the separate ligature of the artery, vein, and ureter; others, again, think it is unnecessary to ligature the ureter; and others that the ureter had best be stitched to the external wound. The most important thing, however, is to securely control the vessels without putting too great a strain upon them in doing so. To attempt in all cases to get the kidney on to the surface before ligaturing the vessels would be to run a great risk of lacerating the coats of the artery or vein beyond the point at which it is possible to apply the ligature; the advantage of leaving the ureter untied has yet to be proved. In no case is it advisable to excise the last rib, and where the costo-iliac space is very narrow some other form of operation, not the lumbar, should be adopted.

The dangers of the lumbar operation are that (1) the peritoneum or the colon may be torn open; (2) too great strain on the vessels of the pedicle may cause their laceration, or the ligatures may slip after the kidney has been cut off; (3) the kidney may be broken in the manipulations for separating or withdrawing it. All these accidents have occurred, but they are not necessarily fatal. The laceration of the kidney requires the hæmorrhage to be controlled by pressure, and by hastening the completion of the operation; a great safeguard against hæmorrhage from laceration is the application of the double ligature before attempting to withdraw the kidney. If the ligatures have slipped or fail to control the vessels of the pedicle, or if troublesome hæmorrhage from any source arises, it will be best managed by the application of one of Wells' large ovariotomy forceps, which should be left in the wound, and will in addition act very well instead of a drainage-tube. If the colon be torn, the rent should be closed by suture; if the peritoneum is opened, it may be either sutured or left, as without stitches the surfaces will fall together and quickly adhere. In Mr. Couper's case of scrofulous pyelitis the hole in the peritoneum was sutured, but before this was done pus from the kidney had contaminated the inner surface of the peritoneum, yet the patient rapidly recovered, and the operation, which lasted two hours and a half, was throughout all but bloodless.

Abdominal Nephrectomy should be performed in cases unsuited to the lumbar method. They have been already

[2] British Medical Journal, September 29th, 1883, p. 615.

[3] I would lay special emphasis on this point, as being of much assistance in this step of the operation.

specified. The best incision is that which many of the old surgeons employed in all abdominal sections, and which Langenbuch, of Berlin, has recommended and practised in at least two successful cases of nephrectomy[4]—namely, along the outer border of the rectus abdominis on the side of the kidney to be removed. The midpoint of the incision will probably be the umbilicus, but this must entirely depend upon the size and outline of the tumour.

All bleeding, which is sometimes considerable in this incision, being stopped, and the peritoneal cavity opened, the state of the opposite kidney can be ascertained, if need be, by digital examination. The intestines should be kept aside from off the surface of the kidney to be removed by means of a large flat sponge introduced into the abdomen. The outer layer of the mesocolon should then be opened sufficiently to allow of the introduction of two or three fingers behind the peritoneum and into the fat in front of the kidney; the fingers should then gently tease their way towards the renal vessels, around which ligatures should be secured. If the vessels are tied separately, care should be taken to secure the artery before the vein. The ureter should then be seized by two pairs of ovariotomy forceps and divided between them. Langenbuch's object in selecting this incision was to divide the outer layer of the mesocolon, and so avoid risk of hæmorrhage; this is more particularly necessary on the right side, since the inner layer of the mesocolon covers the vessel passing to the ascending colon. The enucleation of the tumour should next be proceeded with; lastly, the vessels should be divided outside the ligatures, and the mass removed from the body.

The ureter should now be tied with ligature silk, like the vessels; or the upper end can be turned out (as I suggested at a meeting of the Medical Society in November, 1882) through an opening specially made in the loin, and there stitched to the external wound. Mr. Barwell[5] has also advocated a lumbar opening with the object of draining the retro-peritoneal space, but I am not aware that it has been carried into practice. The supposed advantage of bringing out the end of the ureter is that it allows of the escape of any pus or scrofulous material which it contains, and also of the antiseptic irrigation of its canal. The advantage of this is doubtful, except perhaps in scrofulous pyonephrosis. The plan of fixing the cut end of the ureter out of the anterior abdominal wound seems to me to invite the subsequent occurrence of intestinal obstruction.

Median laparotomy has been several times employed, but is not so good as the above.

Abdominal nephrectomy is completed like ovariotomy, and the subsequent treatment is the same.

The dangers of the operation will appear from the following comparison of the causes of death after the lumbar and abdominal methods. From an examination of forty-two fatal cases out of 100 nephrectomies collected by Dr. Robert P. Harris,[6] I find the following facts come out. The cases are arranged according to the nature of the operation:—

Causes of Death.	Abdominal Nephrectomy.	Lumbar Nephrectomy.
Suppuration	1	0
Peritonitis	10 (4 being septic)	2
Hæmorrhage	4	1
Uræmia	1	5
Shock	4	7
Infarction	2	0
Pyæmia	1	2
Vomiting	0	2
Total	23	19

Thus it appears that peritonitis, hæmorrhage, pulmonary embolism, pyæmia, and exhaustion from suppuration are more frequent causes of death after abdominal nephrectomy than after lumbar, in the proportion of 18 to 5; whilst the number of deaths from uræmia, vomiting, and shock, after lumbar nephrectomy, as compared with abdominal, is 14 to 5. The greater mortality of lumbar operation from uræmia and shock is due to the fact that in several of the lumbar cases it was subsequently proved that both kidneys were diseased at the time of operation; that in one case the last rib had been removed and the pleural cavity laid open; in another the patient was reduced by cancer of the uterus; and others were in an unfit state for any surgical operation of importance. The abdominal operation, therefore, seems to be a much more formidable procedure; and the fatality from causes directly traceable to the operation, and apart from the state of health of the patient, is much higher in it.

Looked at from the point of view of the totals, the same conclusion is arrived at, but the difference is not so striking. Thus out of the hundred cases, the nature and result of the operation were recorded in ninety-six. Of these forty-six were abdominal nephrectomies, of which twenty-three recovered and twenty-three died. Fifty were lumbar nephrectomies, of which nineteen died and twenty-seven recovered. A good deal as to result depends upon the nature of the disease for which the operation is performed, but less than might be *a priori* expected. Of eighteen operations for malignant disease nine died; and of sixteen for floating kidneys six died. Of the sixteen cases of floating kidneys fourteen were submitted to abdominal operation, and six died; two were treated by the lumbar method and both recovered. Of seven lumbar operations for uretral fistulæ six recovered and one died.

I think the conclusion pointed by these figures is that though in some cases from size of tumour the abdominal operation is easier, and therefore safer, the lumbar method is, as a rule, much safer, and to be preferred in all cases where the kidney is not much enlarged, where the tumour can be reduced by puncture, and when the loin space is not too much contracted.

Kroner[7] collected and analysed forty-one cases of nephrectomy. In twenty-one the abdominal operation was performed, with fourteen deaths; and in twenty the lumbar operation, with five deaths; but in three others the result is unstated. From these cases Kroner concludes that the higher mortality of the abdominal operation is not owing to the greater danger of it, but is due to the fact that these cases include those in which the diagnosis was uncertain, and the operation was therefore commenced tentatively. This is an argument of little weight unless it could be shown that the tentative operations were undertaken by operators not qualified for the task, which is neither asserted nor implied. Kroner's cases are included in Harris's list.

Lateral Retro-peritoneal Nephrectomy.—Mr. Thornton has suggested a method which may be described as the lateral retro-peritoneal operation. It consists in making an incision parallel with the linea semilunaris, but further out than it, and then reaching the kidney by raising the colon and peritoneum. The plan would probably answer very well for certain tumour cases, and Mr. Thornton has employed it successfully in a case in which the ureter of a healthy kidney had been divided in ovariotomy.

The advantage claimed for abdominal nephrectomy and for the lateral retro-peritoneal method is that they enable the vessels to be enucleated and tied before the main enucleation is performed, and that thereby hæmorrhage is saved.

The curved incision used for ligaturing the common iliacs or aorta might be substituted for the lateral incision of Thornton.

[4] Transactions of the International Congress, 1881, p. 278.
[5] British Medical Journal, May 26th, 1883, p. 1005.
[6] An Analytic Examination of 100 Cases of Extirpation of the Kidney, by Robert P. Harris, Amer. Jour. of Med. Sciences, July, 1882, p. 109.
[7] Archiv für Gynäkologie.

THE TREATMENT OF
RECENT TRANSVERSE FRACTURE OF THE PATELLA BY MEANS OF THE WIRE SUTURE WITHOUT OPENING THE KNEE-JOINT.

BY J. E. VAN DER MEULEN, M.D.,
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As the treatment of transverse fracture of the patella has again been under discussion since Sir Joseph Lister's address before the Medical Society of London, Oct. 29th, 1883, I deem it desirable to recall the attention of the profession to an article on page 30 of THE LANCET, Jan. 3rd, 1880. In that communication I related a successful case of suture of the transversely fractured patella, and at the same time proposed to future operators the method brought into practice in that case—viz., to suture the fractured patella without opening the knee-joint. This proposition does not appear to have attracted much attention, since no mention has been made

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of any surgeon following the practice I advocated. Not that the article entirely escaped attention, for it was referred to by Sir Joseph Lister in the discussion following his address, and by Mr. Turner before the Clinical Society of London. In a communication to the *British Medical Journal*, Dec. 1st, 1883, Mr. W. T. Clegg, referring to a proposition by Brigade Surgeon E. D. Tomlinson, on page 998 of the journal for Nov. 17th, drew attention to the extra-articular nature of the operation urged some years ago by me, and demonstrated by the case reported. In two later operations I have found the observation confirmed which I made in the first case—viz., that after the removal of blood-clots from between the two fragments of the patella a thin but distinct membrane existed between the posterior edges of the fragments, separating the space between the fragments from the cavity of the joint. This permitted me to perform the entire operation in each case without opening the cavity of the joint. In the first of these later cases twenty-five days had elapsed since the accident; in the second case nine days were allowed to elapse before the operation. It seems to me, therefore, a fact of great importance that the suture of the transversely fractured patella is practicable in most recent cases without opening the joint. Like Sir Joseph Lister, I am of opinion that the operation of suturing the patella is quite permissible when performed under strict antiseptic precautions. As all surgeons have not the same faith in the antiseptic treatment, and often neglect some of the minor details, the operation will be seen in a very different light when it is proved that to employ the wire suture it is not necessary to open the joint. I do not mean to assert that in all cases this occluding membrane will be found, even after sufficient time has elapsed since the accident; for it would be illogical to say because it existed in three cases it must exist in all. Notwithstanding this, I feel confident that the occluding membrane will be found in at least the majority of cases. I have felt confident of this since I found the explanation of the origin of this membrane in my second operation.

In this second operation, after laying bare the interstice between the bony fragments, I found between the anterior edges of the fragments, and uniting them, a bluish-white membrane slightly concave to the front (A). Dissecting away this membrane, I came upon blood-clot (C), of a coffee-brown colour, and tolerably dry, filling the space between the two bony fragments. Having removed these blood-clots with Volkmann's spoon, a thin but distinct membrane (P), very similar to the anterior membrane, became visible, uniting the posterior edges of the fragments, thus separating the space between the fragments from the cavity of the knee-joint. This case threw light upon the probable way in which the membrane is formed. It seems to me that the blood lying between the two fragments of the patella, when these fragments are kept at rest and at a moderate distance from each other by the ordinary back splint and bandage, after coagulation undergoes organisation—i. e., the formation of young connective tissue in the place of the blood-clot; and that the so-called organisation of the blood-clot begins and advances most rapidly at the anterior and posterior surfaces, where the blood-clot is separated by a capillary cleft from the adjoining parts. This fact is quite in accordance with what has been observed in the organisation of the thrombus after ligature of a bloodvessel. There also one observes that the granulation tissue developing from the seat of ligature advances much more rapidly in the capillary cleft between the thrombus and the wall of the bloodvessel than in the thrombus itself. Between the two membranes the blood-clot remains provisionally, becoming organised very slowly. When at last the intermediate portion of the blood-clot is replaced by connective tissue, the ligamentous union between the fragments, the ordinary result of this treatment, is complete, and like connective tissue generally is very apt to be easily stretched. When union has proceeded so far, it is too late to perform my operation, the knee-joint would have to be opened to suture the fragments and the uniting tissue totally removed. At an earlier period, however, say ten to twenty days after the accident, the anterior membrane and the more or less changed blood-clots can be removed whilst the posterior membrane is preserved. The anterior membrane is not always easily seen as a distinct membrane, since it is adherent to the overlying soft parts and may be dissected away with them. Acting in this manner, and taking precautions not to tear the posterior membrane whilst boring the canals by handling the fragments gently one can perform the suture as an extra-articular operation.

To illustrate the practicability of the method described I will briefly narrate the cases I have operated upon.

CASE 1. *Recent transverse fracture of the right patella, operated upon eight days after the accident.*—Operation on July 13th, 1878. On Dec. 12th, five months after the operation, perhaps much earlier, for I did not see the patient between Sept. 8th and Dec. 12th, the patient could flex and extend the right knee-joint as well as the left. She walks as well as before the accident, quite normally in fact.[1]

CASE 2. *Recent transverse fracture of the left patella, operated upon twenty-five days after the accident.*—A lad of about thirteen years, whilst playing leap-frog, fractured his left patella. He was seen the same evening, June 1st, 1882, by Dr. Van Nes, who found the knee-joint painful and very much swollen. Ice-bags were applied, the limb fixed on a back splint, and elevated. The swelling of the knee-joint was much reduced in a few days. A bandage was then applied, in addition, in the form of a testudo genu, but the fragments of the transversely fractured patella could not be brought, much less retained, in apposition. Dr. Van Nes, fearing the result would be a useless limb, requested me to come over to Waddinxveen (South Holland) to perform the wire suture operation. On June 26th (twenty-five days after the accident) I saw the patient at Waddinxveen in consultation with my former pupil, Dr. Van Nes. The interval between the fragments was then about two centimetres. The patient having been narcotised with chloroform, the limb was exsanguined by the elastic bandage. All antiseptic precautions were observed. I made a longitudinal incision along the front of the patella and laid bare the posterior membrane as above described. After freshening the surfaces of the fragments and removing the tissue from the anterior edges of the bone, a canal was drilled with a bradawl in corresponding parts of each fragment obliquely, the bradawl appearing on the fractured surfaces just in front of the cartilage covering the posterior surface of the patella. Dr. Van Nes depressed the posterior membrane with a probe, whilst I drew the fragments together with a soft platinum wire, fixed the suture by torsion, cut off the ends, and depressed them into the soft tissues in front of the patella. The one suture sufficed; more would have been superfluous. The soft tissues were drawn together with two catgut sutures; the skin wound was closed with aseptic silk, and a small catgut drain left in position. A typical antiseptic dressing was applied with moderate firmness, the limb again fixed on the back splint and placed in an elevated position. Dr. Van Nes conducted the entire after-treatment of the case. I am indebted to him for the following particulars. The patient made an excellent recovery. On the evening of the operation the temperature was 37·5°C., but never exceeded that. On the third day the dressing was renewed; the gauze was dry, and marked only by a slight, aseptic, dry blood-stain. On the tenth day the dressing was again changed; the silk sutures were removed from the skin. The wound was soundly healed. Another dressing was applied as a precaution. Two or three days later a plaster-of-Paris bandage was applied over the last dressing. Six weeks after the operation the patient was allowed to move about with the plaster bandage on. The plaster bandage was removed seven weeks and a half after the operation. The knee-joint was then very stiff; active and passive flexion of the joint was commenced. On Sept. 13th, 1882, Dr. Van Nes wrote to me as follows:—"The stiffness of the knee-joint has almost gone; the patient can bend it nearly to a right angle. He walks quite normally. The patella is freely movable, and no depression can be felt at the seat of fracture, but rather a little crista."

CASE 3. *Recent transverse fracture of the left patella, operated upon nine days after the accident.*—Mr. V. B——, aged about forty years, of the Hague, whilst visiting his relations at Utrecht, fractured his left patella by muscular violence in descending the steps leading to the ferry. His brother-in-law, the hospital apothecary, did not permit him to move, but secured a stretcher from the hospital, and had him removed to his mother's house. I saw the sufferer

[1] Vide Weekblad van het Nederlansch Tijdschrift voor Geneeskunde, p. 241, No. 17, 1879, and THE LANCET, p. 30, Jan. 3rd, 1880.

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three-quarters of an hour after the accident. The knee-joint was then moderately swollen, and but little painful; the patella was broken transversely, the two fragments being pretty equal. The interval between the two pieces was one centimetre. I laid the matter before the patient, and proposed the wire suture, which he gladly accepted. I also told him that I thought it advisable to wait eight or ten days before operating. Ice-bags were applied to the joint, the limb placed on a back splint, and elevated, whilst the fragments were retained closely together, and at rest by a testudo genu. On April 7th, assisted by Dr. Vos, Mr. Jonker, and Dr. Van der Heyden, chief of the Medical School and Hospital at Kobé (Japan), I performed the operation exactly as described above. I pointed out the posterior membrane, which was not so far organised as in the second case, and of a bluish-red colour, to my friend Dr. Van der Heyden. He was also of opinion that it was formed by the blood-clot in process of organisation. The interval between the fragments was at this time one centimetre and a half. Whilst I was gently boring the holes for the wire the membrane could be seen fluctuating. The bony surfaces were then freshened, and the space between was sponged out with a weak solution of corrosive sublimate (1 in 1000). The fragments were drawn together with a thinner wire than I had previously used, and the wound closed. A typical antiseptic dressing was applied, the limb placed on a back splint, and elevated. There was a little pain during the first two days. On the evening of the second day, April 8th, the temperature reached 38·2° C.; with this exception the temperature did not exceed the normal.—April 19th: Dressing removed; the wound healed; pad of salicylic cotton applied to protect the young cicatrix; the back splint reapplied. Four days later a plaster bandage was applied from the toes to the hip, and the patient allowed to get up; but to remain in his room. At the end of May he walked about a little with the plaster bandage still on. On June 2nd the bandage was removed. The patient was warned not yet to bend his unprotected knee-joint. Misunderstanding the warning, however, he frequently bent the joint to restore the movements of the stiff knee, and on June 7th the union between the fragments was thus strained. On inspection I found slight tenderness and a little effusion of blood under the soft parts. Rest and a mercurial application were ordered. On June 12th the swelling had disappeared. I could then feel a slight separation of from one to two millimetres between the fragments, but did not feel absolutely certain of this. For security I instructed the patient to wear the apparatus proposed by Mr. H. Parson,[2] but it caused pain and a little soreness. Meanwhile I became certain that a little separation existed, for there was slight lateral mobility of the fragments. By the middle of July the strength of the limb had so much improved that the patient returned to the Hague, and in August resumed his duties as under station master on the Rhenan Railway. In September, however, whilst standing before his desk, Mr. V. B—— felt his left knee suddenly give way, and he fell. He was removed to the hospital at the Hague, and two days later was operated upon a second time. I have since heard he made a very good recovery. That the unfortunate complication of refracture in this case has nothing to do with the mode of operation I propose will be clear. The only circumstance in the operation I can think of that might have contributed towards the accident was the use of a weaker platinum wire than in my previous cases. In consequence the fragments were not so strongly drawn together for fear of breaking the wire.

Finally, since I have demonstrated that suture of the transversely fractured patella with wire can be performed in the majority of recent cases—say ten to twenty days after the accident—without opening the joint, and since this is not possible in old cases, it will therefore be far safer to operate in recent cases than in old ones.

Utrecht.

[2] Vide THE LANCET, May 19th, 1883, p. 862.

IT is not an uncommon practice, we believe, in Yorkshire to administer the leaves of the arbor vitæ (Thuja occidentalis) to horses for the purpose of imparting a gloss to their coats. It is a practice, however, that cannot always be followed with impunity, and a farm servant at Driffield was last week sentenced to a month's imprisonment for causing the death of a mare by this means.

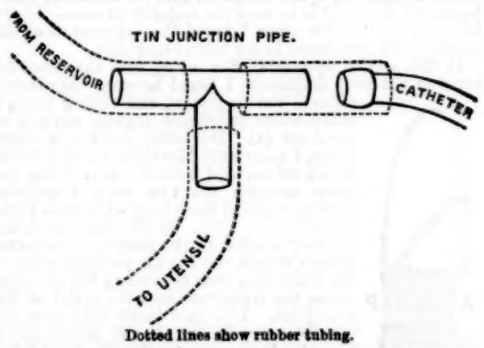
ON ASEPTIC BLADDER WASHING.

BY SOLOMON C. SMITH, M.D.,
SURGEON TO THE HALIFAX INFIRMARY.

WASHING out the bladder is a proceeding which when properly performed is calculated to relieve, and in some cases to cure, very serious conditions, but if ill done is pregnant with mischief. It is one of the most efficient methods of treating chronic vesical catarrh, and it is the most useful means at our disposal for checking that septic inflammation of the bladder which constitutes one form of what has lately been spoken of as "catheter fever." Offensive urine is, in my experience, always bacterial, and there is no reason why septic bladder catarrh should not be treated on ordinary surgical principles either by washing out the cavity or by drainage by means of perineal section, or by both measures combined. To wash the bladder without doing harm four points must be attended to.

1. The catheter must not press with its point against the opposite wall of the bladder—in other words, when the eye has entered the cavity it should go no further.
2. During its stay in the bladder the catheter should be perfectly still, therefore one hand will be fully occupied in holding it steadily in position.
3. No pressure should be made upon the abdominal walls.
4. No germs of decomposition must be introduced, therefore *the catheter must be clean* and *no air must be allowed to enter*.

The first and the last are the most important rules, and if they are rigidly followed the sort of catheter employed is to



Dotted lines show rubber tubing.

a great extent a matter of taste, and of individual preference. For the effectual removal of septic mucus it is generally necessary to flush the cavity many times at each sitting, and at each alternation between outflow and inflow there is great risk of introducing air if the operation be done either with a syringe or a funnel and elastic tube, the two usual methods. Moreover, the syringe labours under the additional disadvantage of having a limited capacity, while the amount of fluid which the bladder requires to flush it is a very variable quantity, in some cases an ounce and a half being enough to open its sacculi, and in others five times that quantity being not more than sufficient. With the object of avoiding some of the risks of the operation, and reducing it to such simplicity that it can be performed by the patient himself, and can therefore be repeated frequently, a point of importance in many cases, I have contrived an apparatus which I will now describe, and which I may premise can be readily made by any tinman. The principle on which it acts is that the water flows into the bladder from a reservoir held aloft, which may be a common tin can holding a quart or more, and that when it flows out again it passes into the chamber utensil through a separate tube, and that these tubes being made of soft indiarubber, alternate compression of one or other will cause the water to flow alternately in and out of the bladder. It is obvious that for this purpose there must be a sort of three-way or T-shaped junction-pipe close to the end of the catheter, one arm being connected by tubing with the reservoir, another with the catheter, and the third leading to the utensil. Each arm should be about half an inch long, and of such calibre as to fit tightly into such a

size of vulcanised indiarubber tubing as will slip easily, but watertight, over the end of the catheter. A hole is to be bored in the side of a quart can close to the bottom, and half an inch of tin tube of the same calibre soldered into it. Two feet of rubber tubing will connect this with one arm of the T, one inch more will connect the other arm with the catheter, and about a foot will carry the downstroke of the T into the utensil. An American clothes-peg or pinchcock on the long tube will prevent water flowing before it is wanted. To use it fill the can with warm water (98° to 99° F.), pass the catheter, slip on to it the short tube, and thus let the urine flow into the utensil, elevate the reservoir and remove the pinchcock, thus letting water flow for a moment also into the utensil so as to drive all air from the tubes, then with the finger and thumb compress the upper tube so long as urine flows through the lower one, when this ceases change the compressing finger and thumb to the lower tube, thus making the water flow into the bladder; in a few seconds change the finger back to the upper tube, stopping the down flow and letting the water flow again from the bladder into the utensil, and repeat this alternation as long as the water is at all soiled. The assistant who holds the can must all the time keep it constantly replenished. The most generally useful fluid is water, or water slightly impregnated with sodic sulphate (½ per cent.), but in various cases I have found carbolic or salicylic acid, or quinine solution or weak nitric acid, to act for a time more beneficially than the simpler wash; the great point, however, is to use enough fluid to leave the bladder clean.

I showed this apparatus at the Leeds Medico-Chirurgical Society three or four years ago, but I then drew the water from the reservoir by a syphon. I soon found, however, that a much more trustworthy plan was that which I have now described, attaching the tube to the bottom of the reservoir.

Halifax.

CASE OF STRANGULATED UMBILICAL HERNIA; OPERATION; RECOVERY.

By J. BERNARD, F.R.C.S.I.,
MEDICAL OFFICER, H.M.'S PRISON, HULL.

On Nov. 16th, 1883, my attention was called to E. S——, a female prisoner, aged forty-seven, who was complaining of pain in the abdomen in the neighbourhood of a hernia of many years' standing. She stated that she had usually been able to reduce the hernia (which was umbilical), but occasionally had to seek advice at the Hull Infirmary, where once or twice chloroform had been necessary for its reduction. Her present symptoms began after a day's work in the laundry. On examination, I found a tumour at the umbilicus the size of an orange, with an irregular surface, of a deep-red colour, and somewhat tender when touched. There had been no action of the bowels since Nov. 13th. The patient said that the tumour was now about double its ordinary size. Whenever it had so increased on previous occasions she had generally been able to push it back. Now, however, she could not do so, and it was causing her great pain. I attempted to return the mass by taxis, but failing, ordered the patient to remain in bed, and to take a dose of compound senna mixture.

Nov. 17th.—Was sent for last night at 10.30, in consequence of the patient complaining of the pain increasing; it was now generally over the abdomen, which was somewhat distended. I administered chloroform, and again attempted to reduce the hernia by taxis, but failed. I ordered forty drops of the tincture of opium, and enjoined perfect rest. On visiting her this morning, I found no diminution in the pain and distension of the abdomen. No action of the bowels had taken place. The patient's pulse was rapid; she complained of nausea, and had been unable to take any nourishment since early yesterday. Judging the case to be of some gravity, I called in Dr. Robinson of Hull in consultation, and, after a more complete attempt at reduction by taxis under chloroform, we determined to operate. Whilst preparing for the operation, vomiting of a bilious character came on. The patient being fully under the influence of chloroform, an incision was made in the direction of the neck of the tumour, and after carefully dissecting through the subcutaneous tissues, which were very fat, the peritoneum was reached. The forefinger introduced into the wound detected at once a tight constriction about the neck of the sac. Being still unable to return the mass, the peritoneum was laid open, exposing a mass of omentum, and an incision was made in the constriction with the hernia knife. The mass was then readily returned, no intestine being seen, although looked for. The wound was brought together by several wire sutures, and dressed with carbolised oil on lint, and a stout pad, and bandage. The patient quickly rallied from the operation. She was placed on low diet, with extra milk and beef-tea; she was also ordered forty minims of the solution of morphia.—18th: She complains of great pain, generally over the abdomen, which is distinctly tender to pressure; she has rested badly; pulse 100. Ordered fifteen minims of tincture of opium every two hours, until the pain is relieved. The bowels acted last evening after the operation very freely.—19th: Pain almost entirely gone, but still some tenderness; says she feels much better. The tincture of opium to be given every three hours. Catamenia appeared to-day after an absence of nine months.—20th: Improving; pulse 84.—22nd: Wound dressed, and sutures removed; union by first intention in almost the whole length of the wound; still a little abdominal pain, so that opium is continued.—26th: Progressing favourably, but complains of colicky pains. Ordered a purgative enema at once.—27th: Bowels acted freely after the enema given yesterday; she is free from pain.—11th: There has been a daily improvement since the last report. All medicines have been discontinued, and the patient has been able to get up. She was allowed out of bed yesterday and to-day.

Jan. 4th, 1884.—Discharged quite well.

Hull.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nullaautem estalia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HACKNEY UNION INFIRMARY.

A CASE OF HYDROPHOBIA OCCURRING ELEVEN MONTHS AFTER DOG-BITE.

(Under the care of Mr. J. J. GORDON.)

On November 30th, 1883, R. C——, aged twenty-nine, a labourer, was admitted at 12.15 midday, said to be suffering from catarrh. Beyond the fact that eleven months previously he had been bitten by a dog in a public-house and that he had been of intemperate habits and lived an irregular life, his previous and family history were unimportant. He was at work on the 29th all day and did not complain on reaching home. He went to work on the 30th (day of admission), but left off at breakfast-time in consequence of feeling ill. On his way home he felt so bad that he went into a public-house and called for some ginger brandy. In trying to drink it he failed, as "it took away his breath" the moment he put it to his lips. He stated that his behaviour frightened the people in the public-house. On arriving home he told his wife that he was very ill and wanted to see a doctor. She tried to persuade him to have some tea but he obstinately refused, saying it would choke him. He visited the parish dispensary, walking there with great difficulty, and obtained an order of admission to the infirmary.

He was seen immediately on admission, and put to bed. His face was very flushed, and his countenance wore a sullen, semi-stupid expression; tongue flabby, slightly furred, and tremulous; the fauces and back of the pharynx were reddened; respiratory murmur normal; heart's action quickened, but regular. (The examination of his chest seemed to cause him anxiety, and brought on spasmodic attacks.) Temperature normal; pulse 98. He had not been in bed long before he began to tremble all over, as if from nervousness or fear. Whilst putting some additional clothes on the bed the sheet happened to get over his face, when he nearly jumped out of bed, and made a great fuss. In the act of receiving his medicine from the nurse some of

it was spilled upon his hand; at this he went momentarily mad, and could scarcely be kept in bed. He managed to swallow a very small quantity of the medicine. The diagnosis now was clear. He complains of pain in the neck and throat, and a feeling of discomfort in the præcordial region, and "a sort of all-overishness." Each time he attempted to drink it brought on a spasmodic attack of the respiratory muscles, but on pouring the fluid into his mouth by a paper funnel (a device of the nurse in attendance), so that he could not see it, he was able to swallow a little; he could swallow better if it was forced suddenly than if allowed to trickle slowly into his mouth. He was very anxious to take both food and drink, but had a horrible fear of it choking him. Anything that caused the slightest vibration in the atmosphere or furniture of the room, such as spreading the bedclothes, knocking his bedstead, or a person walking swiftly past his bed, would bring on a severe spasmodic attack of all the muscles of respiration. Later in the afternoon an attempt was made to feed him by the nose, as it was thought that by passing the nasal tube beyond the larynx, and nourishment entering the œsophagus without passing over the fauces or epiglottis, possibly an attack might be avoided. The introduction of the tube, however, induced a spasm, and when the fluid passed from it into the œsophagus the patient jumped up in bed, and frantically pulled the tube out of his nose, the fluid returning through the mouth. The manœuvre was not repeated.—7.30 P.M.: Temperature 99·4°. When spoken to the patient was quite rational, and after an attack he said to the nurse, "How stupid of me. Is it not silly to be so frightened and nervous? I know they [meaning the other patients] won't hurt or do anything to me; but I feel as if everybody is going to hurt me. I hope I shan't hurt you or the little nurse, because I know you are not afraid of me." He would have done anything for the two nurses. During the night he was very restless, and had no sleep whatever. In one of his attacks he cried out, "Oh! kill him! kill him!" as if he were speaking of the dog. During another attack, when the nurse relaxed her hold of him, he exclaimed, "Don't leave go of me, or I shall have to get out of this." He repeatedly during the night told the nurse not to be afraid of him, as he would not bite her. On one occasion he said to the nurse, "Can you get another bed and smother me, or do something with me?" Each time he attempted to drink he asked to be held. He said a lump used to travel from his stomach to his throat and choke him. He asked for some bread-and-butter to be sopped in tea, but when he got it could only take a very small portion. The nurse described him as having a sort of fit, lasting from 12.40 until 1.25. Otherwise he was quite rational, obedient, not violent, but very anxious to go home.

December 1st, 9 A.M.: The perspiration was streaming off his face, his eyes starting from their sockets, and altogether his countenance was anxious, wild, and agitated. He was quieter if left alone. A large quantity of tenacious mucus was secreted, and this collecting in his throat would bring on a spasmodic attack. At this stage he would spit into a receptacle and not about the bedclothes, as he did later on in the day. Temperature 99·4°. He complained of being parched but could not drink. There was no priapism. 12.30 P.M.: He was given the bed pan and his bowels were going to act; the attendant went to the end of the ward to get a screen to put round his bed. He immediately jumped out of bed, snatched a knife from the table and attempted to cut his throat, but was prevented doing so by one of the patients. On the nurse reproving him for attempting to injure himself, he said, "You do not know what it is to have this horrible feeling. I feel that I shall hurt somebody. I would much rather take my own life than hurt anyone." After attempting to injure himself he was removed to a private ward. He refused to go if carried by the male attendants, but would willingly be transferred if the nurses would take him. An enema of brandy and beef-tea was ordered, but he would not allow it to be given. During the afternoon he continued in much the same condition. 4 P.M.: He became more violent, and it was necessary to restrain him by means of a strong shirt; he wished to be restrained, and when a convulsive attack was coming on he begged to be held down. 6 P.M.: He lay in a semi-comatose condition without moving for about two hours. He secreted a large quantity of tenacious mucus, which he spat about the floor. 9 P.M.: The restraint was removed; he instantly jumped out of bed and attacked one of the attendants. They both rolled on the floor, and the attendant received a severe bite on the finger and some saliva from the patient got in his eye. 9.30 P.M.: He was put back to bed, and seemed much exhausted. From this time the attacks were continuous. He died gradually asphyxiated at 11.60 P.M., thirty-five hours after admission. He said from the first that he would die. He shunned speaking about the dog. The ordinary treatment recommended by the text-books was adopted.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

SURGICAL CASES.

(Under the care of Mr. WM. BERRY.)

FOR the following notes we are indebted to Mr. J. H. Jackson, M.B., C.M. Edin., senior house-surgeon.

CASE 1. *Genu Valgum of Left Leg; Osteotomy; Cure.*—E. R——, aged thirteen years, school-girl, was admitted on August 1st, 1883. Osteotomy was performed on the 10th without difficulty with M'Ewen's chisel, no so-called antiseptic precautions being observed. A long splint was applied. In the evening of the second day the temperature rose to 100° F. The patient had no rigor, but felt chilled.—11th: Temperature, morning, 101°; feels well, but the wound, which had appeared healed, discharged some sanious fluid. Temperature, evening, 101·4°.—12th: Pulse 102°; temperature, morning, 101·6°. The patient has not slept so well, yet does not complain of feeling ill; has vomited a little. Ordered two-grain doses of quinine every four hours. Wound discharges sanious fluid, and has opened up a little; it was syringed out with carbolic acid lotion. Temperature, evening, 101·2°.—13th: Feels better; slept well; tongue clean; pulse 102; temperature, morning, 99·4°; wound discharges freely. Temperature, evening, 101·2°.—14th: Temperature, morning, 98°; evening, 99·6°. The wound was dressed daily with dry dressing, but was first syringed out with carbolic acid lotion. The patient now improved daily, the wound filling up by granulations. A splint was kept on the outside of the leg for four weeks, and a gutta-percha short splint over the dressing.—Sept. 8th: The bone appeared tolerably firm, but it was thought advisable to keep a back splint on for a time while she was up.—24th: Can walk about the ward very well, but there is still a superficial sore over the wound. A few days after this she was discharged well.

CASE 2.—*Sarcoma of Left Thigh; Removal; Recovery; Recurrence; Death.*—T. V——, aged fifty-seven years, engineman, was admitted on Aug. 9th, 1883, suffering from a large growth occupying the front of the left thigh. Family history good. He first noticed a small, painless swelling three years ago. Four months before admission he felt as if something gave way in his leg, and found the tumour larger next day; and since then it has increased rapidly. The transverse measurement was twenty inches and sixteen inches longitudinally, and freely movable, as if encapsuled and not connected with the bone.—16th: A long incision was made in the long axis of the tumour, and the adhesions over it were broken down with the handle of the scalpel. The tumour was found to lie immediately over the sheath of the great vessels and to pass under Poupart's ligament. With some little care it was completely enucleated and removed. Two large drainage-tubes were inserted and the edges of the wound brought close together. The tumour was found to weigh ten pounds; but through delay a microscopical examination was not made.—17th: Pulse 90; temperature, morning, 99·8°. The patient feels comfortable, but has not entirely recovered from the shock of the operation. Pulse 120; temperature, evening, 102·8°. Dressings changed; a little serum escaped.—Aug. 18th: Pulse 80; temperature, morning, 99°, much better and more comfortable; pulse 100; temperature, evening, 100·6°. After this he progressed daily; the dressings, oakum-pads, and absorbent wool-pads were changed as often as were necessary, the wound being syringed out with a weak solution of carbolic acid before the pads were put on. The drainage-tubes were dispensed with as soon as the excessive discharge permitted it. The patient was discharged cured on Sept. 12th.

Two months after this the swelling reappeared, and the skin became infiltrated. The centre of the cicatrix opened up and formed fungous hæmatodes. When the case was seen again it was too late to suggest amputation through the hip-joint, as the skin in the groin was implicated. The man died a short time after this from exhaustion.

CASE 3. *Scirrhus of Right Mamma; Removal; Recovery.*—M. J. B——, aged fifty-one years, a farmer's wife, was ad-

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mitted on Aug. 6th, 1883, for scirrhus of the right mamma. It was first noticed three years ago. The patient was the mother of a large family of children, all healthy. There was no family history of cancer, and the patient never had any affection of the breast during suckling. On admission, the tumour was not large, but very hard, with a slight scar in the centre, and over it large blue veins were very distinct On Aug. 9th the breast and tumour were removed, and also an enlarged axillary gland. One hour and a half after the operation free bleeding took place, which required a swabbing with a strong solution of perchloride of iron to stop it. The temperature never rose higher than 101° F., and on the evening of the 10th was 99°. Dry dressing (absorbent pads) formed the dressings, which were changed as often as was necessary. She was discharged cured on Aug. 31st.

CASE 4.—*Enlarged Submaxillary Gland; Removal; Cure.*—J. B——, aged seventeen years, a factory hand, was admitted on July 25th for chronic enlargement of the submaxillary gland, which had existed for two years, and had resisted all local and internal remedies. She was anxious to have the deformity relieved, and consented to removal. On Aug. 9th chloroform was given, and an incision parallel with the lower jaw was made over the swelling, the skin dissected back and from each side with the handle of the scalpel, and the gland removed. There was very little bleeding, which was stopped by pressure. The edges of the wound were brought together and a pad applied over it.—10th: Temperature, morning, 99° F.; pad changed, wound appears healed. At night she felt cold, and the temperature rose to 103°.—11th: Jaw feels stiff and she feels out of sorts. Temperature 101·2°; pulse 98. A blush appeared over the side of the neck up to the angle of the jaw; this was painted with tincture of iodine and a purgative was ordered, to be followed by large doses of solution of the perchloride of iron every four hours.—13th: Blush disappeared; wound re-opened to half its extent. Temperature, morning, 99·6°, evening, 102°; tincture of iodine applied. From this time she progressed and the wound healed in a few days. She was discharged cured on the 28th, and was very much improved in appearance.

NEWCASTLE-ON-TYNE INFIRMARY.

CASE OF EXCISION OF THE PATELLA; RECOVERY WITH MOVABLE JOINT

(Under the care of Mr. THOMAS ANTHONY DODD.)

CATHERINE S——, aged twenty-nine years, married, was admitted early in September last suffering from disease of the right patella. The history she gave was that some nine months before she commenced to have great pain and starting in the knee, particularly at night, accompanied with swelling and stiffness in the joint, and, as far as could be made out from her statements, suppuration afterwards followed over the joint. The condition on her admission was that the skin was irregularly ulcerated over the centre of the patella to about the size of a shilling, with the diseased bone lying *in situ*. On Sept. 25th, under strict antiseptic precautions, Mr. Dodd proceeded to gouge out, as he thought, the portion of dead bone, and found the whole soft and carious, the instrument passing through the entire thickness and entering the knee-joint. It was then evident that nothing short of excision of the bones would entirely remove the disease. A crucial incision was therefore made and the skin dissected off. The quadriceps tendon and ligamentum patellæ were divided and the bone, which was exceedingly soft and cheesy, taken out. In doing this the interior of the knee-joint was freely opened, the articular ends of the femur and tibia being fully exposed to view, and the synovial fluid escaped. With the exception of the patella, the rest of the tissues forming the joint were perfectly healthy. A drainage-tube was introduced and the flaps brought accurately together with catgut sutures, Lister's dressing applied, and the limb placed on a back splint with foot-piece. There was not the slightest constitutional disturbance, nor any necessity to take down the limb. However, in a week the dressings were removed, when it was found that the wound into the joint had healed except where the drainage-tube was inserted; this was now withdrawn, and a week afterwards, when the dressings were again changed, there was only a small superficial sore remaining. This healed rather slowly, but a month after operation had entirely closed up. The splint was kept on for another fortnight, when friction and gentle movements were adopted, and gradually she became able to fully extend the limb and bend the knee to nearly a right angle. On Nov. 17th she walked out of the house, having a useful movable joint. Her temperature was never elevated except on one occasion, the seventeenth day after operation, and then only to 101°. On December 6th she walked a mile without assistance, to be present at a meeting of the Northumberland and Durham Medical Society.

Remarks by Mr. DODD.—So far as I can learn this is the first case of excision of the patella followed by a useful joint on record.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Congenital Absence of Femora.—Obstruction of Trachea from Enlarged Glands.—Natiform Skull.—Cerebral Tumour.—Porencephalie.—Tumour of the Thalamus.—Cerebral Tumour.—Calcified Angioma of Brain.

AT the ordinary meeting of this Society, held on Tuesday last, Mr. J. Whitaker Hulke, F.R.S., President, in the chair, many papers of neurological interest were read.

Mr. ROGER WILLIAMS showed photographs of a boy, nine years old, with Congenital Absence of the Femora. The apparent head of the tibia could be felt in the groin. No trace of femur or patella could be felt on either side. The right limb could be abducted very freely. Adduction in the left limb was great; abduction slight.—Mr. JOHN WOOD remembered a dwarf having a similar formation of body. He was wonderfully agile; the arms reached to the ground. The dwarf was dissected at University College. The agility of this dwarf was an argument in favour of resection of single bones, for it showed how much nature could adapt herself to circumstances.

Mr. MAKINS read notes of a case of Obstruction of the Trachea by Enlarged Glands. The patient was a male child, aged three years, who suffered for some time from dyspnœa on any exertion; there was recession of the chest walls. The dyspnœa was much worse during expiration. Some stridor and cough were present with a normal voice. Nothing abnormal was detected in the pharynx or fauces. A small sinus ran upwards and outwards beneath the skin of the neck. After Dr. Felix Semon had seen the patient, tracheotomy was performed low down in the neck. Some surgical emphysema appeared in the front of the neck and thorax after the operation. The laryngoscopic examination was unavoidably limited to the epiglottis and arytenoid cartilages. The interior of the trachea was perfectly healthy; tracheotomy, however, afforded only temporary relief. It must be mentioned that there was some difficulty in swallowing solid food. At the autopsy the sinus in the neck led down to suppurating glands, and caseating bronchial glands, chiefly about the root of the right lung, were found greatly enlarged and pressing on the trachea. Mr. Makins said that cases were rare in which the point of division of the trachea was obstructed by the pressure of enlarged glands in children. The glands in this case were suppurating and a spontaneous opening into air passages might have taken place.—Dr. FELIX SÉMON said that he might be held responsible for the performance of tracheotomy in this case. He suggested that a web or polypoid body might have produced the symptoms. Gerhardt had pointed out that the larynx made violent respiratory excursions when a foreign body existed in it. He was unable to explain why the difficulty was a purely expiratory one. Recently he had had an almost similar case.—Mr. BLACK asked whether during expiration, owing to diminished capacity of the thorax, a tumour might be pressed on the trachea during expiration.—Dr. EWART considered that during expiration the large veins would be more distended, and might increase the obstruction. He said perforation of the trachea by caseous glands was by no means an uncommon post-mortem fact, the swelling of a gland preceding suppuration was more considerable than after pus had formed.—Dr. DAVID LEES asked whether on percussion there had been any dulness either in front or behind the chest.—Mr. MAKINS, in reply, suggested that during expiration a greater collection of mucus at the point of obstruction would occur than during inspiration. The trouble was not entirely expiratory. There were no physical signs of a mediastinal tumour during life.

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Dr. NORMAN MOORE exhibited a specimen of Natiform Skull removed from a boy aged one year and eight months, who died in St. Bartholomew's Hospital in one of Dr. Church's wards. The skull showed four large osteophytes round the anterior fontanelle, and several smaller ones on the supra-occipital region. These when fresh were all of a bright-red colour. There were no anal or oral fissures, no beads on the ribs or enlargements of the long bones. The spleen weighed six ounces. A microscopic examination of the kidneys, liver, pancreas, and spleen showed them to be free from any increase of connective tissue. There was no amyloid disease. The child never had snuffles or rash. At three weeks old it had diarrhœa; whooping-cough at seven months, and gradually lost flesh thence till death, when it weighed only ten pounds. There were no signs of specific disease in the mother; she had had no miscarriages. The child was one of six, three of which were living; none were stillborn. It is certainly difficult in this case to be positive as to the influence which produced the osteophytes in the skull, and the case suggested that they might be produced by mere malnutrition without any congenital taint.

Dr. ILOTT read notes of a case of Cerebral Tumour which occurred in a male, aged twenty-five. The patient had been a painter for five years. He had suffered from loss of appetite, giddiness, sickness, and falling down in the street. There was a vacant expression, and he answered questions slowly; marked tremor of the facial muscles, worse on inspection, was observed. The breath was of fetid odour; the gums swollen, and with a blue line at their edges. The abdomen was retracted and the umbilicus tender. General tremor and vomiting were observed later on, and squinting with epileptiform convulsions and rigidity of the right arm were present towards the end of the illness. The post-mortem examination showed excess of subarachnoid fluid with dilated ventricles, and a tumour was discovered in the right frontal lobe which had thinned the cerebral cortex of the orbital surface. The tumour was softened and at parts ill-defined and projected into the left ventricle. It had a reddish colour and was in a state of softening. Microscopically, roundish nuclei with an amorphous hyaline or faintly granular ground substance were seen. The growth was excessively vascular.—Dr. GOODHART said that the facial convulsion might possibly be explained by the tumour having pressed back towards the island of Reil and so involved the facial motor region. So the case might be regarded as a good instance in favour of localisation of function.—Dr. ILOTT said that the only unilateral phenomenon was rigidity of the right arm. Intra-ventricular pressure of fluid might explain some symptoms.

Dr. B. G. MORISON read notes of a specimen of Porencephalie shown conjointly with Dr. CHARLWOOD TURNER. It came from an infant, aged eight months, who soon after birth was attacked with bilateral convulsions and slight fever, which lasted for two weeks; several recurrences of this sort took place. At the autopsy a pint of fluid was found in the arachnoid space, and hydrorachis was present. The right hemisphere was considerably atrophied, especially the frontal lobes, where a brownish-yellow discolouration of the convolutions, which was most marked on the left side, however, existed. There were three cysts on the left side of the basal surface of the brain, a collapsed cyst on the right side at the point of the temporal lobe, and several other cysts were found in the anterior and other parts of the brain. Probably none of these communicated with the cavity of the lateral ventricles. The right lateral column of the spinal cord showed a patch of degenerated atrophy, as seen in total transverse sections. Dr. Morison next dealt with the pathology and literature of the subject. Kundrat's paper was referred to. In that paper the frequency of the porencephalous condition in the area of distribution of the middle cerebral artery was pointed out. The extra-uterine cases were probably the result of thrombosis of the vessels. The intra-uterine ones were attributed to anæmia, and therefore most evident at the periphery of the region supplied by the middle cerebral. The perivascular sheaths of the blood-vessels might have something to do with the formation of some cysts. Dr. Morison thought the present case was chiefly due to inflammatory conditions, which accomplished their cystic development by means of further degenerative changes.—Dr. CHARLWOOD TURNER referred to the fibro-nucleated growth which could be seen microscopically in the wall and neighbourhood of the cyst. Notwithstanding the destruction of brain substance, bundles of fibres, which seemed to run in and join islets of grey matter, could be detected in microscopic sections. The spinal cord showed some sclerosis of one direct pyramidal tract and more considerable degeneration of the opposite crossed pyramidal tract.—Dr. HALE WHITE said that in this instance the holes appeared to be produced by cysts of the ependyma. In porencephalie a primary degeneration of the brain was spoken of. He did not think this case represented the whole of the pathology of porencephalie.—Dr. EWART referred to a case which was published by him in the Transactions of the Pathological Society for 1879. There was much tunneling of the cerebrum and a curiously close packing of all the cysts with membranes.—Dr. ANGEL MONEY briefly mentioned some facts of a case which he had contributed to the Transactions of the Clinical Society for 1883.—Dr. BERNARD O'CONNOR inquired whether there was asymmetry of the skull.—Dr. MORISON, in reply, said that he felt sure there was no communication with the lateral ventricles; no alteration in the shape of the skull was observed in his case, and the forceps had not been used.

Dr. PYE-SMITH showed a specimen of Tumour of the Thalamus. The tumour occurred in a lad aged twelve years, who had suffered from frontal headache, vomiting, and failure of sight, with decided paresis of the left arm, most evident in the hand. At the autopsy a tubercular caseous tumour was found, exactly limited to the right optic thalamus, and signs of tubercular meningitis were present. The glands of the mediastinum and mesentery were enlarged and caseous. The caseous tubercle was strictly confined to the optic thalamus, and had not encroached on the corpora striata or quadrigemina, though it had expanded the crus cerebri on the same side. There was no marked loss of sensation in any part of the body, and no rigidity. Further, there were no convulsions; but ptosis of the right eye was evident. The portio dura was not involved. Double optic neuritis was detected before death. The term thalamus nervorum opticorum was suggested as a better name than optic thalamus. Brief remarks on the supposed functions of the optic thalamus were made.—Dr. ANGEL MONEY thought the evidence vitiated as regards "localisation" by the presence of meningitis.—Dr. NORMAN MOORE thought that the presence of certain characteristic symptoms prior to the development of tubercular meningitis was of legitimate value in respect of localisation of function.—Dr. PYE-SMITH, in reply, urged that the symptoms of meningitis only developed during the last two weeks of life. There had been but moderate pyrexia.

Dr. ORMEROD showed a specimen of a Tumour in the Right Cerebral Hemisphere. It was rounded in shape, and about the size of a large walnut, and projected originally a little above the level of the adjacent cortex. It involved the posterior part of the middle and lower temporo-sphenoidal convolutions and the adjacent parts of the annectant gyri. The tumour was fairly well defined. Microscopically the structure was that of a sarcoma, with scanty stroma and cells of two kinds—the one small and fusiform, the other much larger and multi-nucleated, like the cells found in ossifying bones. The latter cells varied in size and shape; some were rounded, others elongated. Clinically, the patient was a man, aged forty-one, who had had fits for eighteen months. There was momentary loss of consciousness and general tremor; but lately he had one much more severe fit. Something seemed to burst in his head; a hissing noise followed; he turned round to the right several times, fell unconscious, bit his tongue, and was convulsed, but only on the left side. Prolonged coma followed. The man was deaf from ear disease, but his wife asserted that the deafness was worse since the severe fit. Optic neuritis subsequently developed. Some physiologists placed the centre for hearing in the temporo-sphenoidal lobe.—Dr. B. O'CONNOR asked whether aphasia and headache had been present.—Dr. ORMEROD replied in the negative as regards aphasia, in the positive in respect of headache.

Dr. GOODHART read brief notes for Dr. Bevan Lewis on a specimen of Calcified Angioma taken from a female, aged sixty-one, who was affected with melancholia and visual and auditory hallucinations during life. The melancholic agitation led to exhaustion and death. A tumour, the size of a pigeon's egg, was struck when the brain was sliced. Many enlarged perivascular canals were to be seen on section, and many closely packed needle-like projections were observed. Acids gave rise to effervescence from the production of carbonic acid. The tubular structures seen corresponded to

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calcareous spicules, which were undoubtedly calcified vessels. The specimen was no doubt one of great rarity.

The following card specimens were shown:—Mr. Morrant Baker, Epithelial Cancer following Syphilitic Ulcer of the Tongue (living specimen). Dr. Turner, Defective Brain Cyst and Adeno-sarcoma of Brain. Dr. Sharkey, Primary Cancer of Kidney. Mr. Clutton, Congenital Papilloma in the Line of a Branchial Fissure. Mr. Lockwood, a dissected specimen of Colles's Fracture. Mr. Parker, Congenital Absence of the Rectum. Dr. Taylor, Tumour of Pituitary Body. Mr. Pearce Gould, Congenital Fatty Tumour of Thumb. Dr. Carrington, Recent Cerebro-spinal Meningitis.

CLINICAL SOCIETY OF LONDON.

Pulmonary Regurgitation.—Multiple Hepatic Abscesses in a Boy.—Œsophagotomy.

A MEETING of this Society was held on March 14th, Sir A. Clark, President, in the chair. An announcement was made to the effect that a sum of money had been voted by the Council towards the Wheatley Memorial Fund. The proceedings were of an agreeably lively nature.

Dr. J. R. FOWLER read some brief notes of his case of Pulmonary Regurgitation. The patient was a female, aged twenty-three, a domestic servant, who first came under notice in August, 1882, complaining of a little cough and loss of weight with some dyspnœa and pain in the left axilla. The right lobe of the thyroid gland was enlarged. There was a distinct diastolic thrill and murmur in the second left interspace, no evidence of hypertrophy of the left ventricle, but the impulse over the right ventricle seemed a litle more forcible than natural. When seen in January, 1884, the girl complained of vertigo with pain about the sternal region. On percussion there was an area of dulness in the second left interspace with a visible pulsation there. Dr. Fowler thought that there was regurgitation through the pulmonary orifice and that the pulmonary artery was dilated. Moreover, he considered that changes in or about the artery were in progress. The report of the committee, signed by Drs. Moxon, Douglas, and Powell, said that the case was probably one of regurgitation through the orifice of the pulmonary artery.—Sir A. CLARK inquired whether the notion of an abnormal case of mitral stenosis had suggested itself. To this question a negative answer was given.

Dr. SAMUEL WEST read a paper on a case of Multiple Hepatic Abscess in a boy treated by incision, with recovery. A Jewish lad, aged eleven, who had never lived out of London, had a rigor on Jan. 21st, and pain in the right hypochondrium. He was brought to the hospital on Feb. 20th with evident hepatic abscess, extremely ill, and a temperature of 105°. On Feb. 23rd a large abscess was aspirated, and thirteen ounces of greenish sweet pus were removed. Four days later a free incision allowed seven ounces and a half of turbid purulent fluid to escape; a second abscess was discovered and aspirated, one ounce of blood-stained pus being removed. On March 6th two of the swellings were again prominent, and were freely laid open, a drainage-tube being inserted. On April 9th a fresh abscess was found, explored, and then freely laid open. From this time convalescence commenced, interrupted only by a diffuse abscess in the abdominal walls, which healed alone on being opened and washed out. The main features of the case were the age, eleven years; the number of abscesses, three or four, and probably more; the absence of any assignable cause; the great relief by evacuation; and rapid fattening during convalescence.—Dr. CARRINGTON said that the paper raised questions of interest pathologically and clinically. He spoke of several cases which had been under his care at the Seamen's Hospital in which the liver had been riddled with abscesses without a focus of infection ever having been discovered. A case recorded by Dr. Goodhart in the Pathological Society Transactions seemed to show how a pylephlebitis might lead to changes in the liver which eventually healed. Clinically typical symptoms might be absent; he thought, for example, that rigors, sweating, and jaundice were quite as often absent as present. Mention was next made of the case of a woman with much fever and hepatic tenderness, which turned out to be a large cirrhotic liver. There had been marked pyrexia, with no other inflammatory lesions—e.g., pneumonia—to account for it.—Sir A. CLARK was much interested in cases of hepatic abscess, and he had dealt with cases having no enlargement and no tenderness of the organ involved. He spoke of the case of a clergyman who suffered from much fever, with frequent morning sweatings and long-continued illness, in whom the detection of friction at the base of the right lung effected the diagnosis of hepatic abscess. By tapping ten or twelve ounces of pus were withdrawn from the liver, and this operation was repeated four times. Sir Andrew insisted on the absence of enlargement and tenderness and on the presence of localised friction or localised pneumonia in cases of hepatic abscess; and, in reply to Dr. Glover, said that of the four cases he had in mind none had had jaundice.—Dr. CULLIMORE could corroborate the information of the President from personal experience. Allusion was made to a case in which the diagnosis was obscure. This case presented the signs of an epigastric pulsation with tenderness, a "catch" in the breath, and enlargement of the liver, but without fever or sweatings. Other causes of hepatic suppuration were mentioned, and particularly the presence of guinea-worms. A case was narrated where ulcers of the ileum, arteritis of the hepatic artery, were found post mortem, with the formation of an aneurism, about which an abscess had developed in the liver.—Dr. FOWLER alluded to a paper which he had published in THE LANCET last year, in which he pointed out the frequency of profuse sweatings and pleurisy or pleuro-pneumonia at the right base. He spoke of a case which had been under his care which presented many of the signs of hepatic suppuration, but in which no pus could be obtained by puncturing the liver. The autopsy revealed the existence of an amyloid liver with signs of phthisis. He thought fever was necessarily present in hepatic suppuration.—Dr. MAHOMED thought there were two distinct classes of cases. There was the large, nearly always solitary abscess, which pursued a quiet course and was not of malignant nature; and there were more rapidly progressive cases of multiple abscesses, which resembled pyæmia, and were attended with rigors and jaundice. He considered that the aspect and behaviour of patients with hepatic abscess were somewhat characteristic. They had a tendency to sit up rather than to lie prone. Probably the interpretation of this posture was the endeavour on the part of the patient to escape from the necessity of moving his right side.—Dr. PERCY KIDD had had a case of hepatic suppuration under his care. There had been blood with the stools; and the abscess ruptured into the right lung. The patient died, and at the autopsy, with the exception of a caseous vesicula seminalis, no focus of infection could be discovered. Cases of single abscess might be attended with sweats and fever, and might run an acute course just as was seen more frequently in examples of multiple abscess.—Sir A. CLARK was much concerned about the site and direction in which puncture should be made when an abscess in the liver had to be reached. The liver might be small and not tender. In such an instance a puncture made from the axilla, and as high as the dulness would allow, had succeeded in striking the pus; whereas on the refilling of the abscess a surgeon had made many punctures from before backwards without detecting the pus, and the post-mortem examination showed that the abscess had been missed on every occasion by only a very short distance.—Mr. R. W. PARKER asked what proof Dr. West had that the abscesses were really situate in the liver. He had diagnosed an abscess in the liver when the pus was really derived from an old empyema which had perforated the diaphragm. That instance had made him careful in other later cases.—Dr. WHITE narrated the case of a gentleman who suffered from paroxysmal pain, vomiting, and collapse of sudden onset,—very much like a case of gall-stones. Some fever endured for eleven days after this onset, and the patient became much weakened. Later on the liver became much enlarged, and other signs appeared which led to a puncture being made upwards and backwards from the epigastrium, and pus was found in the left lobe of the liver. The evacuated abscess, though small, went on to reaccumulation, and was finally treated with free incision and a drainage-tube. He did not know what was the cause of the abscess, and no gall-stone had ever been detected.—Mr. RICKMAN GODLEE considered it highly important to keep the purulent discharge free from putrefaction by means of strict Listerism. So treated such abscesses ran an afebrile course. In cases where no adhesions had formed Sir Joseph Fayrer's method of puncturing with a grooved trocar, along which a knife could be slid and a drainage-tube inserted, was spoken of with approval. He also considered that a tropical abscess might simulate a multiple abscess so as to be indistinguishable clinically.—Mr. HENRY MORRIS pre-

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ferred to make a free opening into the abscess after the diagnosis had been made. He believed that cases which were opened through the intercostal spaces were far less successful as compared with those which were surgically treated below the margin of the thorax.—Mr. GOLDING BIRD had treated three cases of hepatic abscess during the last three years. In one he succeeded in tapping the abscess between the folds of the coronary ligament of the liver, nevertheless the patient died. He concurred with the remarks of Mr. Morris.—Sir ANDREW CLARK said in his experience fever was of the low and remittent type in cases of hepatic abscess.—Dr. WEST, in reply, said that there had been much fever in his case, but a case of purulent pericarditis which he had recorded had had no rise of temperature, and a case of pelvic abscess which contained much fetid pus was also afebrile. Dr. Murchison had spoken of a "hepatic intermittent" fever in which the temperature might reach a considerable height in cases of cirrhosis of the liver. The present case was shown as one of multiple abscess, not pyæmic in origin. He agreed that there was risk in tapping the abscess through an intercostal space, and probably from injury of the pleura. A case was referred to, however, in which puncture high up in the back was followed by recovery.

Mr. BUTLIN read notes of a case of Œsophagotomy performed for the removal of a foreign body from the gullet. The patient, a man aged forty-five, swallowed during the night a gold-plate, bearing four teeth and having two long pins. The plate was impacted opposite the cricoid cartilage, where it produced serious spasmodic attacks of dyspnœa and constant dysphagia. Since it could not be dislodged by means of forceps, &c., œsophagotomy was performed about twelve hours after it had become impacted. The plate was removed without difficulty; the patient progressed well during the first two days after the operation, then rapidly died of acute septic poisoning. Attention was particularly drawn to the difficulty of detecting the nature of an impacted body by sounding; to the difficulty of seizing the plate with forceps; to the results of swallowing fluids after the operation. It was contended that the unfortunate issue of this case ought not to influence the general rule of treatment in similar cases—namely, that œsophagotomy should be performed as early as possible after the impaction of the foreign body, if the body be hard and sharp, and it was evident that it could not be removed by less formidable means. The cases of œsophagotomy for the removal of foreign bodies did not show a large mortality from septic poisoning; indeed, the reverse appeared to be the case, for unless septic poisoning were produced by the presence of the foreign body, it had been rare as a result of the operation.—Mr. HARRISON CRIPPS thought it was the only treatment that could have been adopted in Mr. Butlin's case. The foreign body might have stuck considerably lower down in the œsophagus, and then the treatment might be different. Attempts made to push it down into the stomach had certainly succeeded, even where the plate was of considerable size and of irregular shape. A young woman had been under his care who had swallowed a bodkin six inches in length, having at one end a rounded knob. At first he thought the account was that of a hysterical female, but some weeks later a fluctuating spot half an inch above the umbilicus was detected in the middle line; and on laying open the evident abscess the needle was withdrawn without the rounded head. The patient made a good recovery.—Mr. GOLDING BIRD had known cases of even formidable-looking bodies with many irregularities to be successfully passed through the alimentary canal after having been swallowed. Oatmeal food and other such articles were recommended as likely to protect the walls of the intestinal canal from injury. In one case a peri-œsophageal abscess formed, although the foreign body had been passed per anum.—Dr. J. GLOVER had no doubt that Mr. Butlin's operation was done with perfect skill; but he was not satisfied that the body in question could not have been ejected by the use of an emetic. He mentioned a case published in THE LANCET last year in which the employment of a drachm of sulphate of zinc in two doses led to the ejection of a foreign body having four very sharp corners and four very sharp edges. This piece of mutton bone considerably resembled the plate with teeth which Mr. Butlin showed. Apomorphia might be used when the patient could not swallow.—Mr. ARBUTHNOT LANE thought that Mr. Butlin might have got over the sepsis by the use of a soft tube passed through the nose into the stomach, and by which the patient could be fed. The wound in the œsophagus might then have been stitched up.—Mr. EDMUND OWEN inquired why the operation was postponed for so many hours. He spoke of a case in which a gold plate, having four incisor and two canine teeth and a large square hook, had been swallowed. In that case he advised the use of food like that spoken of by Mr. Golding Bird. He did not think that a foreign body would get stuck against the thoracic outlet when it had already passed the "straits" of the gullet at the site of the cricoid cartilage.—Dr. DUFFIN narrated a case from the practice of Prof. Syme where a boy had swallowed a three-pronged fish-hook attached to a strong wire. After some deliberation Syme drilled an ivory ball of appropriate size and passed this along the strong wire. A little concussion forced the barbs into little holes in the ivory ball and the hook was withdrawn successfully.—Sir A. CLARK mentioned another case which Syme had had. The probang was used to assure the patient of the absence of the body from the œsophagus. A rush of blood followed; the aorta had been ulcerated into.—Dr. GLOVER also referred to a case of Syme's. A fish-bone had been swallowed but could not be detected; Syme said the sensation remained, but not the foreign body. A week later the larynx and an abscess were shown to Syme's class.—Mr. BUTLIN said, in reply, he did not deal with the question of foreign bodies impacted low down. Even in cases passed *per vias naturales* an abscess has formed, as Dr. Church had recently illustrated in the St. Bartholomew's Hospital Reports. In his case the stomach was empty and the body was hard and sharp, so he did not care to resort to emesis. He had operated as early as he could consistently with the circumstances of the case. A dentist had told him that mercury rubbed into gold plates could easily effect their fracture, but he did not see how this could be applied to plates impacted in the œsophagus.

The following specimens were exhibited:—Mr. Edmund Owen showed a case of Perforating Ulcer of the Foot in a young girl; Dr. Dyce Duckworth, two cases of the same affection; Mr. Golding Bird and Mr. Godlee each demonstrated a case of Dislocation of the Patella; Mr. Barker, a living specimen of Nævus of the Left Upper Limb; Dr. Anderson, a case of Myxœdema in a female, aged forty.

MEDICAL SOCIETY OF LONDON.

Sporadic Cretinism.—Impetigo Contagiosa.

THE ordinary meeting of this Society was held on Monday last, Mr. Arthur E. Durham, President, in the chair.

Dr. AMAND ROUTH read notes of a case of Sporadic Cretinism with appearance of Myxœdema. The patient, aged twenty-five years and three-quarters, the eldest of four children, born near Southampton, was an inmate of the Home for Incurables, Marylebone-road. There was a distinct family history of phthisis, but no history of insanity, alcoholism, or syphilis. Whilst pregnant with this child the mother was frightened by a bull. The patient was like other children till seven years of age, but plumper than usual, "like a large white pudding, fat, flabby, and of a doughy white colour." At seven years old she ceased growing taller, but grew stouter and flabbier. Her mind was quite unable to receive impressions after this date. Her sister has an enlarged thyroid gland. The patient's height was 3 ft. 5 in., and weight 4 st. 2 lb. Rickety changes were to be seen in the curved spine, epiphyses of lower limbs, curved tibiæ, beaded ribs, and dolichocephalic head. The face was expressionless and swollen; the lips thickened, high coloured, and shapeless; the mouth open; the nose flattened and nostrils dilated; the ears large and flat; the tongue normal; the neck short and thick; the skin dry, waxy-looking, and pallid, except where chilblains existed; the hands spade-like; the hair harsh; and the surface temperature subnormal (45° F.). There were well-marked tumefactions above the clavicles and in the posterior axillary folds. No thyroid body could be felt. The locomotion was slow and tottering; the movements slow and methodical, but unhesitating; the speech slow and monotonous, and in a high-pitched key; the memory was a blank since seven years of age. She could recall events prior to that date. She was indifferent to pain and complained of feeling cold. She passed twenty-five ounces of urine per diem, which contained no albumen or sugar, having a specific gravity of 1015. The daily discharge of urea was 172 grains (10·5 grammes). The appetite

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was good, the breath foul, and a bitter taste was complained of in the mouth; the pulse was 72 per minute. According to Dr. Montague Murray, there was one white to 250 red blood-corpuscles; percentage of red blood-discs to normal standard 86; that of hæmoglobin 77. The patient had never menstruated; there was no leucorrhœa. The pelvis and genital organs were infantile; the uterus was half the normal adult size; the ovaries were twice the normal bulk, soft, and insensitive to pressure and probably myxœdematous. This case bears out previous descriptions of such cases. Attention was drawn to the fact that of Dr. Hilton Fagge's four cases, as also in this, those in which the sporadic cretinism had lasted the longest had the symmetrical swellings least well marked. It was shown that the thyroid gland was probably undeveloped from intra-uterine causes, due to the mother's fright during pregnancy. That the child's general appearance up to seven years of age was that of a myxœdematous baby, that at that age sporadic cretinism supervened, and that the mucous œdema was now showing signs of subsidence. This view of the series of events was shown to be in accord with the evidence of previous writers on the subject.—The PRESIDENT thanked Dr. Routh for bringing so interesting a communication before the Society.—Dr. MILLER ORD thought that myxœdema and sporadic cretinism had many points in common. The present case began a little after infancy, and some time before adolescence. A mixture of conditions was to be observed. The absence of the thyroid, the condition of the skin generally—dry, harsh, anæmic, with diminished sensibility and without uniform swelling were alluded to; there was less swelling of the tongue than in myxœdema, and an absence of swelling of the eyelids; the lowering of temperature of external parts was present; the supra-clavicular swellings were better seen generally in cases of sporadic cretinism; the reduction of weight of the whole body and disappearance of the fulness and tension of the skin as a whole were important features, as were also the arrest of intellectual development and of the development of the sexual organs. The thyroid body varied considerably in cases prior to the full development of myxœdema. Sometimes exophthalmic goitre had preceded the condition of myxœdema and atrophic thyroid body. The case of a lady which presented all the symptoms of myxœdema was related, and it appeared that exophthalmic goitre developed so rapidly later on that the patient lost one eye. It was curious to observe what different sets of symptoms were associated with each enlargement of the thyroid in exophthalmic and the other chief form of goitre. We want to know more of the condition of the thyroid body prior to the development of cretinism and myxœdema.—Dr. FELIX SEMON said that Bal, of New York, had observed after extirpation of the thyroid body the symptoms which Kocher had described as ensuing some time after the operation of thyroidectomy. Schiff had shown that death ensued in dogs in from four to six or eight weeks after removal of the thyroid gland. The animals got very sleepy and died of convulsions. After death there was anæmia of the brain. Schiff and Liebermeister looked on the thyroid gland as a blood regulator for the circulation of the cerebrum. Recently Zesas had asked the question whether thyroidectomy was a physiologically permissible operation. The spleen could be removed without harm, but not the thyroid gland. Of Dr. Routh's case he would say that he could feel a suspicious swelling on each side of the thyroid cartilage, but hesitated to pronounce the swelling to be the thyroid gland.—Dr. HADDEN related the outlines of a case of mixed myxœdema and sporadic cretinism which he had seen in France, and which tallied very closely with the one shown by Dr. Routh. He said that in the present case there was exaggeration of the knee reflexes; these were not exaggerated in myxœdema in his experience. He spoke of the retardation of body-waste, and mentioned that a foreign observer had found undoubted lesions of the sympathetic trunk in the neck and abdomen of a case of myxœdema. The dogs mentioned in Schiff's paper lived only three weeks, and so it was hardly justifiable to draw conclusions as to their mental and physical state.—Dr. ANGEL MONEY said that the knee-jerks were decidedly exaggerated; and, further, the "front tap contraction" of Dr. Gowers was to be obtained.—Sir JOSEPH FAYRER spoke of the cures of goitre to be effected by the ointment of the biniodide of mercury and exposure to a tropical sun. He failed to see what advantage could accrue from a surgical operation when such simple means were so efficacious.—Mr. SYDNEY JONES related briefly the result of his operation of the removal of the isthmus of the thyroid gland in three cases—viz., great atrophy of the lateral lobes. It was a safe operation, and continental experience was like his own.—Dr. CAVAFY said that it seemed to him that myxœdema resembled sporadic cretinism rather than sporadic cretinism resembled myxœdema.—Dr. C. H. ROUTH had seen but little good result from the iodine treatment in any form. He asked what was the mental condition of Mr. Jones' cases.—Mr. JONES replied that the time since the operation was too brief to allow of any positive statement.—Dr. RADCLIFFE CROCKER had used the biniodide ointment in the treatment of goitre, using a strong fire instead of the sun. His success was not marked.—Dr. AMAND ROUTH briefly replied.

Dr. COLCOTT FOX read a paper on Contagious Impetigo. He pointed out that, though independently described by Dr. Tilbury Fox in 1863, and thus made known in America and on the Continent, the affection was discussed by Willan, Bateman, A. T. Thomson, and Startin. After a brief description of the salient points of the eruption, and a reference to its various phases, as it affects the face or occurs widely disseminated as an umbilicated bullous eruption, he dealt with its contagiousness, and gave examples of epidemics in streets, schools, and barracks. The remainder of the paper was then devoted to a discussion of the problem whether every case, even the acute and general ones, should be considered as belonging to this category, or whether any group of cases were to be regarded as an infectious disease like varicella, or an inoculated affection like an acquired syphilis or vaccinia. The conclusion arrived at was that probably all cases were merely local affections, and the severe and acute ones brought about by special virulence of the sero-pus or the presence of organisms. Dr. Fox proceeded to show that certainly a great number of mild cases were entirely local inflammations excited by contact of pus from such various sources as vaccination pustules, dermatitis from lice, festering scratches, or pre-existing cases of impetigo contagiosa, &c., and then kept up by auto-inoculation.—Dr. RADCLIFFE CROCKER was not disposed to draw any marked distinction between impetigo contagiosa and those cases of ordinary pus inoculation. He thought the presumption was strongly in favour of their being identical. He narrated a case in an adult of most extensive impetigo contagiosa which appeared to ensue on irritation from bugs. In the clear contents of the vesicles he had found chains of micrococci, which were more abundant when the eruption became pustular, and were to be seen in the pus cells, especially at their periphery. He believed in the external origin of impetigo contagiosa, and that it was curable by external agencies. The discrete character of the lesions was pointed out. He would not positively assert that the micrococci were the cause of the disease.

OPHTHALMOLOGICAL SOCIETY.

Arterio-Venous Communication on the Retina.—Paresis of Ocular Movements.—Transplantation for Eversion of Lower Lid.—Treatment of Sympathetic Ophthalmia.—Artificial Eye.—Hæmorrhage into Macula.—Tumour on the Sclerotic.—Drawings of Rare Conditions.—Persistent Hyaloid Vessel.—Tumour of Choroid.—Sarcoma of Ciliary Body.—Further Series of Drawings.—Retinal Glioma.—Severe Conjunctivitis.—Glaucoma.—Spasm of Ocular Muscles.—Prevention of Blindness from Purulent Ophthalmia.—Jequirity Ophthalmia.

AN ordinary meeting of this Society was held on March 13th, Mr. Jonathan Hutchinson, F.R.S., President, in the chair. The number of patients and card specimens shown was unusually large.

Mr. R. M. GUNN exhibited a little girl, aged eleven years, in whose retina there could be seen a direct Arterio-Venous Communication. She had come under observation for headaches, from which she had suffered for four years. On examining the left eye it was seen that a branch of the inferior temporal vein sent an offshoot which ran directly into the superior temporal artery. Several of the retinal veins appeared to commence abruptly, doubtless having their origin in the choroid, and piercing the retina vertically. He asked whether other members had seen a similar case and suggested that a like condition of the cerebral vessels might explain the headaches from which the patient suffered.

Dr. ORMEROD showed a man, aged forty-four, suffering

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from Paresis of the upward movement of the eyes. It was most marked in the right eye, especially when the patient looked to the right. There was vertical nystagmus when he tried to look upwards. The other ocular movements were normal, and there was no definite neuritis. The symptoms had been present ten months, but he had a similar condition fifteen years previously.

Mr. STREATFEILD exhibited a man, aged twenty-two years, the subject of Inherited Syphilis, who had had disease of the bones of his face since the age of fourteen years, which had led to an eversion of the lower lid on the left side, the cornea being clear when he came under observation. A raw surface having been made beneath the lid, Mr. Streatfeild transplanted a piece of skin from the forearm, using antiseptic precautions. The upper half of this piece of skin lived, and the deformity had been very much diminished by the operation.

Mr. G. E. WALKER showed a patient whom he had treated for Sympathetic Ophthalmia by removal of a portion of iris.—Mr. HENRY POWER thought that the removal of the iris would not relieve those cases of sympathetic ophthalmia in which the iris and retina were involved. No doubt a few cases of sympathetic ophthalmia were limited to the iris, and in these iridectomy would do good.

Mr. ADAMS FROST exhibited a new Artificial Eye. The lens had a focus of forty millimetres, and could be shortened or lengthened at pleasure. There were two retinæ, one of ground-glass graduated in millimetres, and there were two clips in front to hold lenses. The other retina represented the normal fundus.

Mr. G. E. JOHNSON exhibited an Improved Trial Frame contrived to secure greater accuracy and perfection in adjusting spectacles, and estimating refraction.

Mr. A. STANFORD MORTON showed a drawing of a case of Hæmorrhage into the Macula, and hoped to be able to exhibit the patient at the next meeting.

Mr. F. H. HODGES showed a girl with an irregular, granular-looking body on the outer sclera, which had first been noticed in the outer ciliary region, its formation being followed by iritis, hypopyon, and perforation of the sclera.

Mr. NETTLESHIP exhibited the following drawings:—1. Central Areolar Choroidal Atrophy. 2. Central Senile Guttate Choroiditis (Tay's choroiditis). 3. Syphilitic Retinitis, with retinal hæmorrhages, and growth of new blood-vessels from the disc into the vitreous humour. 4. Glaucoma, with retinal hæmorrhages, thickening of retinal veins and obliteration of arteries. 5. Nævus (? lymphatic) affecting the brow, orbit, and exterior of the eyeball with lamellar cataract. There was no cataract in the other eye.

Mr. M. MCHARDY showed a man with a persistent Hyaloid Vessel in the Right Eye and Choroido-retinal Changes, attributable to inherited syphilis.

Mr. GUSTAVUS HARTRIDGE showed a drawing of a case of Tumour of the Choroid.

Mr. COWELL exhibited a woman with a New Growth (presumably Sarcoma) in the region of the Ciliary Body.

Mr. ARTHUR H. BENSON (Dublin) exhibited the following ophthalmoscopic drawings:—1. A case of Monocular Coloboma of the Iris, Lens, and Choroid; with a bridge of iris-tissue over the coloboma. 2. Central Choroiditis, monocular, pigmented. 3. Central Choroiditis and Retinitis, binocular, slightly pigmented. 4. Choroido-retinitis, extensively pigmented. 5. Choroiditis (myopic), extensively pigmented. 6. Thrombosis (? Embolism) of Central Artery of Retina.

Mr. SIMEON SNELL (Sheffield) communicated to the Society an account of two cases of Retinal Glioma, in one of which shrinking of the eyeball occurred without perforation:—1. A child, aged eighteen months, had, when first seen in April, 1877, in both eyes, at the posterior part, a yellowish-white deposit, more especially the left. A history was given of fits and what was called congestion of the brain. The opinion formed at this time was that it was a strumous deposit. During the next three months the left globe became filled with deposit, the iris infiltrated, and exudation appeared in the anterior chamber. The eye next began to soften and shrink, and ultimately became reduced to a small stump. By September it was noticed that the right eye, hitherto almost quiescent, was apparently going through the same stages as the left. Up to a certain point this was so, and the appearances were similar to those just mentioned in the left before it commenced to shrink. Instead of following this course it became further enlarged, and by April 8th, 1878, it almost filled the orbit. On this day the eyeball was excised, and the growth presented undoubted microscopical appearances of retinal glioma. The return of the disease occurred in a few weeks in the orbit, and the child died in December. The head alone was examined, and details of the result of this examination were given. The points discussed in this case were, Was the disease, from the first, glioma? and did complete shrinking of the globe first affected with this disease occur? Such a condition was thought to be very unusual, and the first appearances observed were against such a view. Or was the primary diagnosis correct, and did the glioma become engrafted on such a condition, like sarcomata, &c., are on damaged eyes? 2. A baby, eight months old, first seen in 1877. Both eyes had at the posterior part a whitish looking growth. Glioma was diagnosed in both eyes. This appearance had been noticed since the child was three months old. On Feb 25th, 1877, the right eye (the worst) was removed. After microscopical examination it was hoped it was caseous tubercular matter, and not glioma. Three years later, April, 1880, the left eye was filled with the growth; its progress had only been noticed particularly of late. The globe was removed on April 19th, 1880. In the following March the child was brought with a tumour on the forehead, first noticed a few weeks previously. This reached a large size, and the patient died on Sept. 28th, 1881. The points of interest referred to in this case were that the glioma was congenital in both eyes in all probability, the quiescent state of the disease in the left orbit for two years or more, the non-return of the disease in either orbit, but on the forehead, which was attributed to a blow.—Dr. BRAILEY said that he had under his notice, some years ago, a case in a young girl of pseudo-glioma of the left eye, followed some time later by glioma of the right eye. In the left eye there was growth of connective tissue cells in the vitreous humour, with proliferation of pigment cells between the retina and choroid. The occurrence of glioma in the right eye made him doubt whether there was not a glioma of the left eye. He thought there might be some relation between tuberculous cases, which were frequently associated with pseudo-glioma, and cases of genuine glioma.

Mr. G. A. BROWN (Tredegar) communicated a case of Severe Conjunctivitis from whisky thrown into the eyes. The patient was seen the day after a glass of neat whisky had been thrown in his eyes. Both eyes were closed; the lids being much swollen, with yellowish sanious semi-purulent discharge from them. The lower half of each cornea was covered by a diphtheritic-like membrane, which could be peeled off, leaving the cornea clear. The conjunctivæ were deeply injected, and there was some ecchymosis, but no chemosis. There was much pain and intolerance of light. Under belladonna fomentations and syringing with a warm weak solution of boracic acid improvement rapidly took place. In two days the membrane had disappeared, and the conjunctivitis and photophobia soon subsided, so that the man was well in a fortnight.

Mr. M. MCHARDY read a paper on the Treatment of Glaucoma, in which he advocated an unusually large primary section for iridectomies practised to relieve primary chronic glaucoma. For such cases he never practised a less incision than he would make were he contemplating the extraction of a full-sized cataract. His ideal incision for primary chronic glaucoma was as nearly as possible the corneal diameter measured in a straight line from the outside of the puncture to the outside of the counter-puncture. The incision lay parallel with, but one millimetre posterior to, the margin of the cornea. He endeavoured to remove the entire segment of iris corresponding to the section. He had never seen occasion to regret the extent of these sections. Their size did not appear to increase the frequency of malignant glaucoma from an advance of the lens, a catastrophe which happened in one out of thirty cases, and was then happily relieved by the spontaneous escape of the lens, without any loss of vitreous humour, twenty-two hours after the operation. This eye made a favourable recovery, and subsequently exhibited a far more satisfactory degree of tension than the fellow eye, which had been since treated by a maximum iridectomy, but from which the lens had not been removed. This patient was exhibited. In the case of a man with recurrent subacute glaucoma, upon the return of glaucomatous symptoms, after a very free upward iridectomy, a similar iridectomy was practised downwards; the lens, presenting in the lips of the wound, was ejected in its capsule at the time of operating; the eye was then treated as after an extraction, and made an uninterrupted recovery. A man

aged forty-seven was shown, whose two eyes had been treated for primary chronic glaucoma by iridectomies through such large sections as had been described. His better eye possessed V=$\frac{6}{18}$, and showed with how close a union these extensive ocular wounds might heal.

Mr. WALKER read a paper on the Treatment and Pathology of Glaucoma. He narrated a case of acute glaucoma, in which there was barely perception of light, and which was so far relieved by the minute operation of hyposcleral cyclotomy that the patient could read No. 1 Jaeger and Snellen $\frac{1}{18}$. He considered, therefore, that the amount of incision necessary for the cure of glaucoma need not exceed one-sixteenth of an inch. The fixed eye being kept open by the speculum, a very narrow knife is thrust through the clear corneal tissue, a line from the sclero-corneal juncture. The direction of the knife is then changed so that the ciliary body is cut through up to the sclerotic, and the knife then slowly withdrawn without enlarging the wound, so as to prevent prolapse of the iris. Speaking pathologically, he believed all glaucomata were due to inflammatory action, which led to blockage of the trabeculæ of the ligamentum pectinatum. Excessive action of the ciliary muscles was believed to be the primary cause of glaucoma, and suitable glasses were what was required for relief or cure. Iridectomy, sclerotomy, and cyclotomy for acute glaucoma all led to relief of the inflammatory tension of the ciliary body. He said Dr. Brailey believed that a new channel being opened up into Schlemm's canal was the way in which incisions relieved glaucoma. Mr. Walker believed that chronic glaucoma was relieved by the surgical production of a subconjunctival fistula. Scars in the globe could stand three times the amount of pressure that normal ocular coats could. He further remarked that Dr. Brailey's teaching that sclerosis and atrophy of the ciliary body resulted at the site opposite to the cyclotomy tended to bear out his (Mr. Walker's) theory of the origin of glaucoma.—Mr. MCHARDY, in reply, regarded Mr. Walker's first case as not one of primary glaucoma. In his experience iritis was not a common sequela of glaucoma. If glaucoma be due to overtaxed accommodation, how was it that youthful students—e.g., the girls at Girton—did not suffer from glaucoma.—Mr. WALKER said that he had not attached much weight in his case to the iritis, which was clearly secondary to the glaucoma. The youngest case of glaucoma which he had seen occurred in a man aged thirty-two.

Dr. GOWERS read a paper on certain forms of Spasm of the Ocular Muscles. He first pointed out that these muscles may participate in the spasm of chorea, and that transient diplopia from this cause is not uncommon during the course of chorea. He next described two cases of partial convulsion affecting an ocular muscle. One was that of a man, aged thirty-six, whose attacks began with a sensation spreading from the inner canthus of the left eye over the borders of the orbit to the temple. This was followed by dimness or loss of sight in both eyes, accompanied by a movement outwards of the left eye, and sometimes a moment's loss of consciousness. If walking, he deviated to the left during the attack, probably from erroneous projection of the left field of vision. The attack lasted only for a few seconds, but recurred many times daily. Except slight amblyopia of the left eye, there was no permanent nervous symptom. The other case was that of a man, aged forty-seven, with slight weakness of both internal recti and the left external rectus. In the attacks there was spasm of the last muscle, blinking of both eyes, and the attack, which lasted only a few seconds, was followed by slight ptosis of the left upper lid for a few minutes. There was never loss of consciousness, and there were no other nervous symptoms. Lastly, a case of convulsive nystagmus was described. The patient, suffering from Bright's disease, died a few hours after the onset of apoplectic symptoms; and post mortem there was an anæmic area in the mesial half of the right side of the pons, above the nucleus of the sixth, and extending from near the floor of the fourth ventricle to just in front of the fillet. There was conjugate deviation of the eyes to the left, and paroxysms of increased deviation, accompanied by nystagmus with quick movement to the left. It was pointed out that the deviation, although corresponding to the paralysing effect of the lesion, was increased by irritation of the unaffected centres in the left half of the pons, to which the nystagmus must be ascribed. The case showed that both spasm and paralysis may coincide in causing a secondary deviation, and also the importance of attending to the direction of the quick movement in nystagmus.

Dr. DAVID M'KEOWN read a paper on the Prevention of Blindness from the Purulent Ophthalmia of Infancy, and in particular on the Utilisation of the Poor-law Organisations of the United Kingdom for that purpose. He said it would be readily admitted by every ophthalmic surgeon that the purulent ophthalmia of infancy had been, and was still, the most fruitful source of life-long blindness; that besides, a vast number of persons have lost, from this disease, one eye or have had the vision of one or both eyes permanently impaired; and that this total loss and permanent impairment might have been entirely prevented by timely medical treatment. The delay in seeking medical relief was the very essence of the question. This neglect arose from want of knowledge; the problem was, therefore, how to supply that want in the most simple and effectual manner. The employment of cards of instructions drawn up in the simplest possible language and distributed amongst all classes of the community, but more especially the poor, was recommended. Verbal instruction might be wanted for those who could not read. The employment, if possible, of an agency which would reach over the whole kingdom was also advised. He had had for some time under consideration the question whether voluntary or Government agency should be sought in the matter. A voluntary association, the London Society for the Prevention of Blindness, had indeed actually prepared for popular distribution a statement pointing out the dangers of ophthalmia neonatorum, and giving detailed instructions for treatment until the services of a doctor were available. But the evil was far too vast to be grappled with by any such Society. There were two plans by which the public might be instructed: First, by the distribution of the card already mentioned; secondly, he proposed that the registrar of births should, on every occasion that a birth is registered, read, and then hand to the person so registering, a copy of the card. After the adoption of this system only one child in a family would run any risk from the ignorance of the parents. The co-operation of medical men, medical students, and midwives ought also to be sought. He thought that the etiology, progress, and treatment of ophthalmia neonatorum should be fully dealt with in every text-book and every course of lectures on midwifery. If the Society agreed with him, he hoped they would pass resolutions with a view to carrying into practice his suggestions. Copies of the principal resolutions ought to be forwarded to the respective presidents of the Local Government Boards of England and Ireland, and of the Board of Supervision of Scotland.—Mr. JOHN TWEEDY said that he seconded Dr. M'Keown's proposition with mixed feelings. One of satisfaction for its publication, the other of humiliation that it had not appeared sooner. He pointed out that in blind asylums about 30 to 40 per cent. of the blind were so from purulent ophthalmia of infancy. In support of this statement actual statistics spreading over a period of ten years, and taken from twenty-two asylums in Germany, showed that 40 per cent. of the patients were hopelessly blind from the effects of ophthalmia neonatorum. He himself had never lost a case of diphtheritic ophthalmia or ophthalmia neonatorum provided the cornea were clear at the time he first saw the case. He believed that severe cases were much less frequent than formerly, but he was decidedly of opinion that this learned Society should step in and complete the work of education which seemed to have been begun. The Local Government agency was perhaps the best way for giving effect to the knowledge. He was certain that thousands of cases of blindness might be averted.—The PRESIDENT said that it was not within the power of these meetings to pass resolutions, but he suggested that a committee be appointed to report on the question at a special meeting convened for the purpose.—Mr. FRANCIS MASON, of Bath, proposed, and Mr. NETTLESHIP seconded, that a committee be nominated to inquire into the subject. This motion was carried.—The PRESIDENT nominated the following gentlemen to serve on the committee:—Mr. Francis Mason, of Bath, Dr. Fitzgerald, Mr. Nettleship, Dr. Argyll Robertson, Dr. M'Keown, Dr. Priestley Smith, Mr. Marcus Gunn, and Mr. John Tweedy.

Dr. BENSON read a paper on Jequirity and its Value as a Therapeutic Agent. He had used the drug in sixty cases of granular conjunctivitis. The freshly ground seeds and freshly made infusion, still free from micro-organisms, also infusions in which the bacilli were dead, and even a six-weeks' old infusion containing an immense variety of micro-organisms, were all capable of producing the peculiar ophthalmia. A $\frac{1}{5000}$ solution of corrosive sublimate prevented bacilli from forming, but did not destroy the power

of the fluid to cause jequirity ophthalmia. So, he said, Sattler's conclusions must undergo some modification; and this was also borne out by Dr. Klein's recent researches on jequirity. He had kept two solutions of jequirity for six weeks; in one the bacilli appeared on the third day, and ceased to move after fifteen days; in the other, at the end of six weeks the fluid was full of actively moving organisms; and this when applied to the granular conjunctiva of a child produced a well-marked membranous inflammation. He said no effect was obtained by transferring some of the membrane to a second child also affected with granular lids. Several observers, including himself, had been unable to detect bacilli in the membrane of jequirity inflammation.

MEDICAL OFFICERS OF HEALTH SOCIETY.

A MEETING of this Society was held on Friday, Feb. 16th, Dr. T. O. Dudfield, President, in the chair.

A paper was read, entitled "Remarks on the Examination of Water for Sanitary Purposes," by Mr. C. E. CASSAL, F.I.C., F.C.S., and Dr. B. A. WHITELEGGE, B.Sc., of which the following is an abstract:—The object of the analyst, by examining the water itself or the solid residue left on evaporation, is to determine the presence or absence of impurities, especially organic, their nature and quantity, and on the evidence obtained to form an opinion as to wholesomeness. Every sanitary analysis of water should include the estimation of nitrates and chlorides and microscopic examination, the latter being far too frequently neglected. The two most important processes to consider as regards estimation of organic matter are the Frankland and the Wanklyn processes, generally looked on as rivals. As regards the alleged antagonism between these two processes, the authors agree with Dr. Fox that when the circumstances are the same, analyses of the same waters made at the same time by the two processes yield results on which precisely similar opinions are based by the different analysts. The Wanklyn process makes the ammonia yielded by the water on boiling with alkaline permanganate of potash a measure of nitrogenous pollution; the Frankland process consists essentially in burning the solid residue of a water and measuring the carbonic acid and nitrogen evolved, thus arriving at the quantities of carbon and nitrogen present. The authors dealt with some of the points in favour of and against these processes, and showed that results from either one or the other could not alone justify the formation of an opinion. They also strongly insisted on the estimation of the nitrates in every case. Dealing with the criticisms to which water analysis has recently been subjected, they called attention, first, to the Local Government Board's report for 1881-82 (medical officer), and to Dr. Buchanan's words therein—viz., that we must go beyond the laboratory for evidence of any drinking water being free from dangerous organic pollution; secondly, to the assertion that in cases where the amount of pollution of a water is known, analysis is found to give discrepant results with equal or proportionate amounts; and, thirdly, to the statement that the "cultivation" processes were to supersede present methods. As regards the first point, it might be admitted that chemical analysis failed to distinguish between dangerous and innocent pollution, if the latter ever occurred, but no merely chemical process could be expected to do this unless it distinguished the characteristics of injurious and innocent pollution respectively. The chemist can only report on the quantity or proportion of organic impurity, be it noxious or not. But if analysis cannot tell us of specific pollution, it can tell us a water is polluted, and in such cases specific pollution may occur. Practically no cases occur where specific poison is present without much appreciable filth. The authors considered the conclusions generally drawn from the history of the Caterham cases by no means valid, pointing out that it was unlikely that the small amount of poison introduced into the reservoirs of the company was uniformly distributed through them, and that in the absence of analyses of the actual samples of water that produced disease no conclusions could be drawn as regards the validity of water analysis. They also denied that one grain of enteric fever stool in a gallon could be called a large befoulment, admitting, however, that it might be dangerous. As regards the discrepancy in analytical results, the authors called attention to Dr. Cory's report on his experiments with purposely polluted waters. Some of Dr. Cory's results were fairly proportionate; others were very discrepant, and the authors therefore repeated some of his experiments. They pointed out the objections to Dr. Cory's use of enteric stools, healthy stools, and urine for polluting the waters, and objected to his plan of further polluting an already dirty water, and calculating results from the increments of ammonia obtained. They maintained that the ammonia procured in the Wanklyn process was a measure of nitrogenous organic matter, and that it represented a constant proportion for varying quantities of the same polluent. They then stated the necessity of a limit for ammonia &c. yielded, and the way in which such limit was to be used; objecting further that a process capable of differentiating between two and three parts of polluting material could not do so between fifty-two and fifty-three parts. The details of some of Dr. Cory's experiments were then examined and criticised. In repeating the experiment with egg albumen as a polluent, the extreme difficulty of getting a uniform solution, even by repeated filtration, was noticed, as also the liability to error, probably impossible to prevent altogether, and requiring the greatest care in working, arising from coagulation of the albumen and the fact that as decomposition of the albumen advanced when equal amounts were used, the yield of albuminoid ammonia increased. The figures obtained by the authors are in no case far wide of those due to the actual proportions present, these proportions having been in every case unknown to the analyst. The discrepancies in Dr. Cory's albumen results would be due to the facts that the quantities to be measured were often very abnormal and determined in an already impure water by increments (added to the latter yield). The cultivation processes are prematurely credited with the capability of supplanting present methods. All waters contain organisms, the commonest being easiest to cultivate; and no means of distinguishing between harmless and specific organisms being known, the process at present merely forms an additional test for organic pollution. The authors then combated Dr. Cory's conclusions as regards the combustion or Frankland process, stating that this process could not achieve more than the ammonia process, accompanied by subsidiary analytical evidence. They considered that nothing in the way of evidence or criticism had been brought forward to detract from the great sanitary value of water analysis, and as regarded absolute safety, that was a thing unknown and unmovable.—In the discussion which followed the President, Drs. Thursfield, Tripe, and Edmunds, and Messrs. W. Blyth and Shirley Murphy took part.

Reviews and Notices of Books.

The International Encyclopædia of Surgery. Edited by JOHN ASHHURST, Jun., M.D. Vol. IV., pp. 987. London: Macmillan and Co.

[FIRST NOTICE.]

THE fourth volume of the International Encyclopædia of Surgery contains some of the most valuable memoirs that have yet appeared on the subjects of which they severally treat. They are as follows:—Injuries of Bones, by John H. Packard; Diseases of Joints, by Richard Barwell; Excisions and Resections, by John Ashhurst, Jun.; Excision of the Knee-joint, by George E. Fenwick; Tumours, by Henry T. Butlin; Injuries of the Back, including those of the Spinal Column, Spinal Membranes, and Spinal Cord, by John Lidell; and, lastly, Malformations and Diseases of the Spine, by Frederick Treves.

Dr. Packard's memoir is of course almost exclusively occupied with the subject of Fractures, and he commences with some judicious observations on the necessity of studying every form that may be presented with the utmost attention, and of avoiding untoward results by the exercise of care, skill, and discretion, since any deformity fixes the attention of the patient and his friends, and is exceedingly apt to lead to legal proceedings, from which the surgeon rarely escapes without some loss both of credit and of money. In regard to the predisposing causes of fractures, Dr. Packard considers that gout, rheumatism, and scurvy, though commonly mentioned under this head, must be included with hesitation, as

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there are few or no well-authenticated cases of fracture which can certainly be referred to them, though there can be no doubt that by crippling or weakening the limbs they may make their subjects clumsy and awkward. It is otherwise, however, with syphilis, which may well be assigned as a cause of fragility in bones, and many cases may be adduced in which fractures have occurred in those suffering from constitutional disturbance of this kind. Locomotor ataxy and rachitis are both credited with rendering the bones preternaturally fragile, and many very interesting cases are cited. Dr. Packard accepts the term "sprain fractures" introduced by Callender; such fractures are most frequently observed about the lower end of the tibia, but have been noted as occurring in the femur and in the upper part of the tibia; it is remarkable that Dittel failed to produce this form of fracture in the dead subject. Intra-uterine fractures, fractures sustained during birth, and various forms of complicated fracture are described, in almost every instance with illustrative cases drawn from American, English, and continental journals. The symptoms of fracture are given under the heads of sound, loss of function, deformity, pain, increased or abnormal mobility, crepitus, swelling, ecchymoses, and trophic changes; and Dr. Packard rightly objects to the employment of undue efforts to obtain crepitus. Should it not be readily felt, he remarks, the surgeon should fall back upon the other means of diagnosis, as by persisting in the attempt to move the fragments upon one another he not only gives present pain to the patient, but may do harm by producing or increasing displacement. When once the surgeon in charge has perceived it he ought not to unnecessarily elicit it again and again, as is sometimes done to satisfy either himself or others. In describing the process of repair the views and statements of Sir James Paget and of Virchow are chiefly followed. In the account of the general treatment of fractures it need hardly be said that all the principal methods in modern use are given. Special reference is made to the treatment of delayed union and false joint, and drawings are given of Pancoast's screw for drilling, and of a more complex drill invented by Mr. T. Gemrig, which is stated to be very convenient. Reference is made to Schede's method, in which, instead of ivory pegs, gilt-steel needles, three and a half centimetres long and two millimetres in thickness, were used by him with advantage in cases of pseudarthrosis. Ten or twelve of these needles are inserted into the softened part of the bone without any complaint of pain on the part of the patient; an antiseptic dressing is then applied. The needles are kept in place about fifteen days, and this simple and convenient procedure has succeeded in all the cases in which it has been employed. The remainder of the article, which occupies no less than 260 pages, is devoted to the fractures of the several bones. An excellent section is devoted to the description and treatment of Colles' fracture, another to fractures of the femur, and we can only regret we have not space to give his very sound and intelligent summary of the treatment of fractures of the patella. The bibliography has been worked up by Dr. Packard in a very admirable manner, typical cases being given, with references to museum specimens both in England and elsewhere.

The second article, on Diseases of the Joints, by Mr. Barwell, is, it need hardly be said, in regard to one who has paid so much attention to this subject, very complete. He takes up in succession synovitis, suppuration, strumous, rheumatic and gouty synovitis, hydrops articuli, movable bodies in joints, acute and chronic articular osteitis, arthritis deformans, syphilitic affections of joints, hip disease, disease of the sacro-iliac joint, anchylosis of various joints, neuroses or hysterical joints, arthropathies from nervous lesions, tumours of joints, exostoses, chondroma, sarcoma and carcinoma, angeioma, aneurism of bone, and echinococcus of bone. To take one example—viz., movable bodies in joints—Mr. Barwell observes that from his investigations he finds that 85 per cent. occur in the knee-joint, though they have been found in the elbow, which is their next most common seat, the hip, lower jaw, ankle and wrist. He gives the varieties they present in number and form, and then shows that their genesis is multiple, some developing from hypertrophied fringes, as described by Rainey; other varieties proceeding from the metamorphosis of some part of the peri-synovial tissue through inflammatory or hyperplastic changes; others from the action of osteophytes detaching portions of the cartilage; others, as John Hunter believed, from blood or fibrin clots; others from ecchondroses; and others from fragments of the normal cartilage detached by quiet necrosis. In discussing the treatment of angular anchylosis of the knee-joint, Mr. Barwell states that whilst some years ago he used to perform all his operations under the spray and dress the wound with all the Listerian complications, he has now ceased to do so, and believes that the wounds heal more quickly, and the patient experiences less pain. Under Listerism the many folds of gauze make a great lump at the place of operation, which renders it difficult to judge of the symmetry of the limb. The plan he at present adopts is to syringe the wound with a saturated solution of boroglyceride; to introduce a few strands of catgut for about half an inch, to act as a temporary drain, over which a pad of cotton-wool soaked in the same solution is placed; through the middle of this pad a piece of indiarubber tubing, one-eighth of an inch in diameter, is passed, and a plaster-of-Paris bandage is then applied, a piece of copper tubing being slipped over the tubing to prevent its compression. This he calls his irrigation-tube, and through it he injects with an ordinary glass syringe about a drachm of the solution of boroglyceride daily for the first three days, and afterwards only occasionally.

Our Homes, and how to Make them Healthy. Edited by SHIRLEY FOSTER MURPHY. With numerous Illustrations. 8vo. pp. 947. London: Cassell and Co. 1883.

THIS is a valuable contribution to sanitary literature. It consists of a series of papers by men of acknowledged reputation and who thoroughly understand their respective subjects, on the construction, maintenance, fitting, heating, lighting, ventilating, and general arrangement of our houses, with a view to the preservation of the health of the inhabitants and the avoidance of preventable disease. After a general introduction by Dr. Richardson on domestic sanitation, the subjects of site and aspect, construction and arrangement, materials and fittings, repairs and alterations, and the style of various classes of houses, are treated at considerable length by Messrs. Gordon Smith and K. D. Young, of the Royal Institute of British Architects. Mr. Edis then treats of internal decorations, including floors and floor coverings, the walls and wall covering, and furniture, supplemented by a chapter on arsenic in wall-papers and paints by M. Morris. This is followed by a paper by Mr. Brudenell Carter on lighting, natural and artificial, giving under the latter head a great amount of valuable information on the various means of illumination in general use, their respective merits, and the precautions to be adopted in the use of them. The subjects of warming and ventilation have been entrusted to Captain Douglas Galton, who, it is perhaps unnecessary to say, has treated them well and exhaustively. We are, however, disposed to think that his remarks on the subject of grates and stoves might have been advantageously condensed, and we are scarcely prepared to admit the accuracy of his statement that "pulmonary disease has almost ceased in the British Army" as a consequence of improved ventilation. House drainage and sewage disposal have been carefully treated by Mr. Eassie, C.E.; and are followed by a valuable and practical paper by Professor

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Corfield on defective sanitary appliances and arrangements. The editor gives an account of the various modes of "disposal of refuse by dry methods," and especially of the "pail" system and the dry earth closets. The subject of water in relation to health and disease, its collection, supply, filtration, and distribution, has been very fully discussed by Professor De Chaumont, Mr. Field, and Mr. Wallace Peggs. In addition to these important matters relating to the house, its fittings, and supplies, there are articles on the nursery by Dr. Squire, house-cleaning by Phillis Browne, sickness in the house by the editor, and legal liabilities by Mr. Eccleston Gibb, which, although they do not contain much that is not already, probably, known to experienced householders, are yet so clearly arranged, and so full of practical suggestions, as to be of much value to those who are either beginning or are still young in the responsibilities of such a position. As we have already said, we consider the book a valuable contribution to sanitary literature, although we think it might be improved when a second edition is called for by a judicious condensation of some of the sections, especially those on architecture and warming.

The Treatment of Wounds: its Principles and Practice, General and Special. By LEWIS S. PILCHER, A.M., M.D., Member of the New York Surgical Society. Pp. 391, with 116 Illustrations. New York: William Wood and Co. 1883.

THIS is one of the best works on the subject of which it treats we have had the pleasure of reading. It is equally satisfactory whether we turn to the subject matter of the text, the choice and execution of the diagrams, or to the excellence of the letterpress.

The section set apart for the consideration of wound treatment in general contains most of what has been written in this department of surgery both at home and abroad. Details are given of the mode of preparation of a large number of antiseptic dressings, and the principles of the application described with clearness and precision. The account of the management of wounds of the intestine, accidental and intentional, will repay a careful study by any surgeon, but especially by those interested in the matter of modern operations upon the bowel. There is scarcely any important means of wound treatment that is not reviewed. Davy's rectal lever and Lister's deep suture plates are amongst many others which want of space forbids us enumerating.

A work of this kind must necessarily embody knowledge drawn from various sources, and be to a great extent a compilation, and in so far it is all the more valuable for reference. Dr. Pilcher fully acknowledges the authors he has laid under contribution. The book will be found a trustworthy guide for the medical student, and a serviceable aid to the busy practitioner.

THE ARMY ESTIMATES.

THE Army Estimates for the year 1884-5 show a decrease in the sum required for medical establishments and services of £11,000, compared with that taken for the preceding year. The difference occurs chiefly in the pay of the medical officers and in that of militia surgeons and civil practitioners. The reduction in the first, amounting to £6650, arises from the retirement of a number of officers entitled to high rates of pay from length of service, who have been replaced by others with less service, and therefore drawing lower rates. In the second group it results, we presume, from the return to England of the greater part of the army medical officers who were employed in Egypt, doing away with the necessity for the employment of militia and civil surgeons with the troops at home. The number of medical officers remains the same as last year, but two additional deputy surgeons-general are taken for service in Egypt, and a corresponding reduction made in the brigade surgeons. The amount required for the pay of the medical officers, including the Director-General and staff at headquarters and the surgeons on probation, is £225,972, with an addition of £11,542 as allowance to officers for mess and in lieu of servants, and for the pay of militia surgeons, including allowance for medicine, is £9400. The charge for civilian medical practitioners and medical officers of military prisons is put down at £6600, of which £350 is required for the colonies, and the rest for home. A charge of £1150 appears under the head of Army Sanitary Committee, made up of the "allowance of £3 3s. a day, when employed, to one civilian member, and contingent expenses of the Committee." We observe that the vote for the military commandant at Netley and his staff has been removed from the medical establishments, and is now included in the pay of the general staff. It is to be regretted that the appointment has not been abolished and the evils of a dual government in our great national invaliding hospital thus got rid of, but we trust this may follow in due course. The Army Hospital Corps is to receive an augmentation of two hundred men, and we notice with much satisfaction that a sum of £500 is to be taken for the pay and allowances of civilian instructors in cooking for the hospitals. This is a step in the right direction towards removing what has long been felt by the medical officers to be a serious defect in the hospital organisation. The usual provision is made for the Medical School at Netley, and for the examination of candidates for admission to the Medical Service, amounting to £6388; and there is also the usual sum of £23,000 taken for medicines and surgical instruments. There are only eight medical officers on half-pay eligible for employment, for whom £2372 are required, and there are 393 on the retired list, whose pay is estimated at £151,000. Thirteen medical officers are in receipt of £100 a year each, as rewards for distinguished or meritorious services.

VOLUNTEER AMBULANCE MOVEMENT.

To the Editor of THE LANCET.

SIR,—It is just a year ago since attention was called to the defective condition of the medical department of the Volunteer force, and the suggestion made of forming a Volunteer Ambulance Corps, corresponding to the Army Hospital Corps, has been taken up with enthusiasm by one or two of our medical schools. But unless something more is done by those who sit in high places the movement will die in its infancy. That such an adjuvant to the Volunteer force is necessary is certain. An army in the present day which does not possess adequate means of treating its wounded on the battle-field cannot be said to be in a good position to take the field at all. But this is really the case with the Volunteer army at the present time. Practically speaking it is destitute of any hospital arrangements. The probability of ever having any wounded appears so remote that such an event has been entirely left out of calculation. The surgeons themselves who are appointed as medical officers to the different corps are without any knowledge of ambulance drill and the details of military hospital work. If such be the condition of the Volunteer medical service, it is high time it should be remedied. The matter does not rest with the students at the hospitals. At St. Bartholomew's and Charing-cross they are doing their best, and have been drilling for a year on their own account, and now what is required is that the Government should take the matter in hand, and give them official recognition.

I am, Sir, yours faithfully,

W. STEPHENSON RICHMOND,
Late Hon. Sec. St. Bartholomew's Ambulance Corps.

St. Bartholomew's Hospital, March, 1884.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The report read at the seventieth annual meeting of the subscribers to this institution on the 14th inst. stated that the number of in-patients on January 1st was 20, and that there had been admitted during the year 256. The total attendances of out-patients for the year was 27,022. The total receipts from all sources amounted to £14,095, and the total payment on all accounts for the year's expenses was £4394.

THE LANCET.

LONDON: SATURDAY, MARCH 22, 1884.

MONDAY next will witness one of the most interesting and exciting events in the annals of medical politics and reform. The result will depend upon the spirit, enterprise, and enlightenment of those who participate in the event. A general meeting of the Fellows and Members of the Royal College of Surgeons of England will take place in the theatre of the College, to consider and discuss the Charters of the Corporation. We have on several occasions announced the precise object of the meeting, and described the circumstances which have led up to it. (See THE LANCET, Nov. 10th, 1883, p. 821, Jan. 19th, 1884, p. 122.) It may therefore be assumed that our readers have made themselves fully acquainted with them. Stated in general terms, the object of the meeting is to enable the President to report certain alterations which the Council proposes to make in the Charters of the College, to elicit the opinions of the Fellows and Members on these alterations, and to receive their suggestions as to any other alterations that may seem to be desirable. Thus for the first time in the history of the College the Fellows and Members have an opportunity of manifesting a practical and effective interest in its affairs, and of exerting a positive influence upon its character and destinies. What that influence may be will, we repeat, depend upon the degree of earnestness, knowledge, and intelligence that the Fellows and Members are prepared to impart to it. Last week we published *in extenso* the alterations which the Council proposes to make, with a reprint of the particular clauses of the Charters to which they refer.

No one who appreciates the tendency of modern thought and has gauged the requirements of the times can have read these alterations without a feeling of disappointment. The Council of the College of Surgeons of England is notoriously distinguished as the closest and most exclusive Medical Board in the United Kingdom. Its constituency is larger in numbers than those of all the other Corporations combined, and second to none in knowledge and capacity, and yet it is practically devoid of political influence and power. The sixteen thousand Members enjoy corporate rights and privileges only in name, and even the twelve hundred Fellows possess little more than the semblance of power. Their influence begins and ends with the election once a year of three or more members of Council, who by the suffrages of the Fellows are for a period of eight years invested with almost unlimited power of affecting the education and status of two-thirds of the whole of the medical profession, but without being trammelled by a particle of responsibility. Forty years ago the possession of such power was condemned as inconsistent with the spirit of true representation, and incompatible with the higher interests of the medical profession. How much more incompatible now! And yet the Council is so insensible to the necessity of any readjustment of its relations with its representatives, that it is content to call the Fellows and Members together without offering a single concession to the repeated demands for an effectual reform. On the contrary, if the alterations it proposes to make be scrutinised, they will be found to tend towards increasing the power, independence, and irresponsibility of the Council. This is truly astonishing, and is only comprehensible on the assumption that the Council has so successfully isolated itself that it is honestly ignorant of the thoughts, aims, and aspirations of those whom it nominally represents. Monday should be a time of reawakening, an occasion of much searching of heart. In any case the meeting cannot fail to do good; but in order that the benefit should be full and fruitful it is indispensable that those who take part in the meeting should make clear to themselves exactly what it is they wish, and then prefer their demands in clear, definite, precise, and unequivocal terms.

After the preliminaries are gone through the first serious business will be the consideration of the alterations proposed by the Council. Some of these will doubtless pass unchallenged, but some will not escape so easily. The alteration in the mode of voting at the election of members of the Council will scarcely need consideration. That has been rather extorted from the Council than conceded by it; it is a measure which the Fellows have demanded and obtained for themselves. The second of the alterations proposed by the Council, to the effect that the arrangements for the examinations for the Fellowship shall in future be determined by a Resolution of the Council, will doubtless receive, as it requires, much attention and even opposition.

Monday's meeting will, however, derive its chief importance not from the consideration of the alterations which the Council has proposed, but from the consideration of those which it has *not* proposed. The alterations suggested by the Council sink into insignificance when compared with those to which it has apparently paid no heed. What these are it is impracticable, from their number and importance, to describe in detail. Even a brief enumeration seems appalling, inasmuch as they appertain to every department of the Corporation, and to every phase of its operation.

It is, in the first place, impossible that the College can remain unaffected by the passing of a Medical Bill such as that now under consideration by Parliament, and arrangements should be made to adapt the constitution of the College to the changes that the passing of such a measure must induce. Reforms, too, are needed in the Council; the tenure of office should be materially curtailed, and at the same time its responsibilities be increased. Among other matters requiring alteration and amendment are the relations of the Court of Examiners to the Council; the constitution of the Board of Examiners in Anatomy and Physiology; the legislative powerlessness of the Fellows; the exclusion of Members from participation in many of the emoluments and honours of the College; and lastly, the mode of election of the President. At present the President is merely a chairman of the Council elected by rotation. In every other medical corporation the President is elected annually by the Fellows. It does not enhance the dignity of the office that the President of the Royal College of Surgeons of England should be elected in any other way.

The necessity of these reforms has long been recognised by unprejudiced observers, and becomes more conspicuous

every year. There is no difference of opinion among the Fellows and Members as to the general nature of the alterations required to ensure the permanent welfare and usefulness of the College, and there should be no serious divergence as to the best mode of accomplishing them. As all the suggestions and recommendations proposed at the ensuing meeting must be made in writing, and have the names of the movers and seconders attached, there should be no difficulty in clearly and explicitly formulating them. The Fellows and Members have reason, right, and justice on their side; theirs be also that union which is strength.

NOT many years ago the applicability of the germ theory to explain the facts of typhoid fever was regarded as rather extravagant. Yet, if there be a disease in which the concurrence of etiological facts points strongly in one direction—namely, in that of the virus being a living organism,—it is in this. So much so, that it is common to speak of typhoid germs as if their existence had been absolutely proved and demonstrated. In the present ascendancy of bacterial pathology, it is not surprising that the uninitiated should demand actual demonstration of the typhoid micro-organism, seeing how such discovery would harmonise with the known etiological, clinical, and pathological facts of the disease. Now, although the search has been pursued in many quarters for upwards of ten years, it is notorious that the results have been discrepant and various. The chief of them may be summed up as embracing two doctrines—viz. (1), that the typhoid organism is a micrococcus, and (2) that it is a bacillus. Such discrepancy is doubtless in part due to the peculiar conditions of the disease and the great necessity for caution in inferring anything from the presence of micro-organisms in the intestine, seeing that it teems with them in health, and that such non-pathogenic bacteria are probably greatly favoured in their growth by inflammatory states of the mucous membrane. We have no doubt that a skilled microphytist (if we may venture so to term him would be able to differentiate in the typhoid ulcer an immense variety of bacterial organisms, putrefactive or otherwise, which no one could assert bore any causal relation to the disease. In spite of these and allied difficulties, the strong confirmation which Dr. GAFFKY has given to EBERTH'S "bacillus," as related elsewhere, deserves attention.

In the first place we have, with minor differences, a common agreement among such observers as EBERTH, KLEBS, KOCH, MEYER, COATS, and GAFFKY, upon the characters of this micro-organism, which is found not merely in the infiltrated follicular glands of the intestine, but in the mesenteric glands, liver, and spleen of typhoid subjects. GAFFKY, indeed, lays more stress upon its presence in these organs than in the intestine, where it can only be distinctly recognised in the earlier stages. EBERTH found it in about one-half of the cases he examined; GAFFKY in twenty-six out of twenty-eight, and he attributes failures to find it to the employment of defective methods, as well probably to the date at which the examination was made; for it would appear that as the disease advances the bacilli become less numerous, and they may not be found at all in advanced stages. Again, they do not seem to stain very readily, and they are not easily distinguished from putrefactive bacteria. That this bacillus, is, however, a distinct variety, is shown by the culture-experiments which GAFFKY records—where, following the well-established methods of cultivation in gelatine, in blood-serum, and in potato, he has succeeded in demonstrating that this micro-organism produces a very different effect from ordinary bacteria. It may be remarked that the mere morphological distinctions between these microphytes are often so minute that much greater reliance, as tests of specificity, must be placed on differences in their mode of growth, and the results they produce in the media in which they live.

The mere fact that a micro-organism of a peculiar kind is found in the organs of those who have died from typhoid fever, especially at an early stage of the disease, will not convince the sceptical that this is the actual typhoid germ, or that it is in any way related to the specific virus of the disease, until it can be demonstrated that the mere introduction of this organism into the body will produce the disease. Has, it may be asked, this same bacillus been yet detected in the contaminated water that so often gives rise to an epidemic? In the epidemic among the Wittenberg garrison, which furnished Dr. GAFFKY with so much of his pathological material, and in which the infection was clearly traced to a contaminated well, neither the air of the barracks, nor the soil, nor the water of the well, &c., could be made to yield a bacillus which gave rise on cultivation to the same products as the supposed typhoid bacillus. Such organisms as were found, which at first sight resembled these latter, did not respond to all the tests. As to the experimental transmission of typhoid fever to the lower animals, it is unfortunate that by no device have experimenters yet succeeded in so transmitting the disease. It is as true now as when Dr. MURCHISON wrote that "experiments on the lower animals do not as yet warrant any conclusions as to the etiology of enteric fever," as it is that "there is no clear proof that any of the lower animals are liable to enteric fever." It is the want of this link in the chain of evidence that compels caution to be exercised not only in respect to typhoid fever, but to other diseases, also non-transmissible, in which micro-organisms are found. Analogy points to the probability of the micro-organisms being specific and etiologically related to the disease; but the truth can only be arrived at by a large accumulation of carefully observed facts. On this ground, then, there is far more evidence in support of the bacillus tuberculosis being a *causa morbi*, than there is of the typhoid bacillus. In the one case the evidence appears complete and direct; in the other it is strongly presumptive, but less conclusive.

AT a recent meeting of the Senate of the London University important alterations in the regulations, affecting candidates for medical degrees, were resolved on, and, as these changes will come into force next year, it is necessary that future candidates should give them their special attention. At the Preliminary Scientific Examination, general biology will take the place of the separate subjects of botany and zoology, and the new syllabus (see p. 551) is now the same as for the Intermediate Examination in Science. The Distoma and Vorticella are introduced, whilst Gregarina, Paramecium, Tænia, Hirudo, Anodon, Helix, and Blatta are omitted. The distinctive characters of the principal British natural orders are removed from the syllabus, and the type

and character of the botanical examination are very much altered. It is now exclusively scientific, and all questions of utility to students of medicine have been carefully eliminated in the new programme. A medical man might have been practically benefited by a knowledge of the life history of the tape-worm; but this is displaced in favour of the fluke. The recently granted privilege of postponing the examination in any one of the prescribed subjects until a succeeding year is now rescinded, and candidates who wish to be admitted to the B.Sc. Pass Examination will be required to pass in mixed as well as in pure mathematics, in addition to the preliminary scientific subjects.

Another important innovation which will in many cases materially lengthen the course, and consequently the expense of obtaining the medical degrees of the University, is the regulation that the period of study between passing this examination and obtaining the degree of Bachelor of Medicine shall in future be *four* years. This will deter every student who has once entered on his proper medical studies from subsequently changing his plans, and will prevent any student of mature years obtaining his degree in Medicine at this University. A more unjust regulation could scarcely be imagined, and the authorities are ill-advised in placing any more impediments in the path of the aspirants for their degrees than now exist.

Candidates for Honours in Medicine at the M.B. Examination, and in Surgery at the B.S. Examination, will in future have their marks at the clinical and practical portions of the Pass Examination added to those obtained for the written answers to the Honours papers. This is a wise change, provided that the number of cases allotted to each candidate and the character of the practical examination be altered so as to give a fair chance for the best candidate to show his proficiency. At the present time the clinical and practical examinations may be sufficient to give an estimate as to whether a given candidate should pass, but they are quite inadequate for such an important decision, and one bearing so much on his future career, as his relative position in the Honours list.

THOUGH, as we have lately said, there is a consensus of medical opinion to the effect that education pressure is telling hardly on children and pupil teachers, it is very necessary that medical men should guard carefully against a tendency abroad to attribute every school child's death to this cause. It is also necessary to be on our guard against the misconstruction of the mortality returns. The most noticeable feature of recent mortality statistics of children of school ages is the marked decline in the death-rate from all causes. The Education Act was passed in 1870, and the annual death-rate of children aged from five to fifteen years in the three years 1870–72 was 6·09 per 1000 living at those ages. After ten years' operation of the Education Act, however, the death-rate of children at these ages, in the three years 1880–82, had fallen to 4·72 per 1000 living. Thus the mortality from all causes of children at the principal school ages declined 21 per cent., or more than a fifth, during the first ten years' operation of the Education Act. Dr. RABAGLIATI does not appear to have stated this fact at the deputation to the Bradford School Board. Let us now see what are the facts to be found in the Registrar-General's reports bearing upon the mortality of children from hydrocephalus and cephalitis, about which Dr. RABAGLIATI makes so alarming a statement. The annual death-rate from hydrocephalus among children aged from five to fifteen years, in the three years 1870–72, was equal to 0·20 per 1000, and rose ten years after to 0·22 in the three years 1880–82, the increase being equal to 10 per cent. The rate from cephalitis rose from 0·19 per 1000 in 1870–72 to 0·23 in 1880–82; this increase was equal to 21 per cent. Thus the increase of mortality from hydrocephalus since the Education Act was passed has been 10 per cent., and not 20 per cent., and the increase from cephalitis 21 per cent., and not 50 per cent., as stated by Dr. RABAGLIATI. There are, however, the very best grounds for believing that even this increase is more apparent than real. The deaths of children at these ages attributed indefinitely to convulsions, which were equal to an annual rate of 0·27 per 1000 living in the three years 1870–72, had declined to 0·17 in the three years 1880–82. The causes of death of children have recently been returned with somewhat increasing detail and precision, and there can be no question as to the probability that many deaths are now certified as due to hydrocephalus and cephalitis which would ten years ago have been merely attributed to convulsions. If we aggregate the death-rates from all three headings—hydrocephalus, cephalitis, and convulsions—we find that they give an annual rate of 0·66 for the three years 1870–72, while in 1880–82 the rate from the same causes had fallen to 0·62 per 1000 living. We do not care to insist that the true death-rate from these causes has declined 6 per cent. in the past ten years, because we fear that the causes of death of children are still not returned with such accuracy as would warrant such precise statistics; but we do think it but fair to the Education Acts to say that, whatever the arguments against them, they are not at present to be much enforced by reference to the returns of the Registrar-General.

IN bringing forward the Army Estimates on Monday last Lord HARTINGTON announced his intention to adopt with regard to the Medical Department the principle which applies to all the other officers, of an examination for promotion. This will, of course, require a new Royal Warrant for the Department, as the examination previous to promotion was abolished by the Warrant of 1879, on the recommendation of a War Office Committee. We think it of importance that some means should exist of ascertaining that the young officer has not entirely neglected the means at his command of increasing his professional knowledge, and of qualifying himself for the more important duties which devolve upon him as he advances in his career. It certainly is an anomaly that the only branch of the service in which no test of competency is required as to the fitness of an officer for promotion should be that one in which such serious responsibilities are involved. Lord HARTINGTON also stated that it is intended "to take such steps as shall put an end to the present relation, which is somewhat anomalous, between the medical and the hospital corps. Some slight alterations in existing arrangements will be necessary in order to bring about the reform to which I am referring, but I hope no real difficulty will be found in the way of bringing the two branches of the service into a unity which does

not exist at present in a perfectly satisfactory form." It is to be regretted that Lord HARTINGTON did not explain what he meant by this, or what changes he intends to introduce; we confess ourselves at a loss to understand what he intended by these dark sayings. He intimated the proposed addition of 200 men to the strength of the Army Hospital Corps, and the establishment of schools of cookery in which the men might be efficiently trained before being detached for duty in the small and stationary hospitals. This is a measure which has long been pressed upon the authorities by the medical department, but which, from motives, we presume, of false economy, has never yet been put in operation. The importance to the sick of having their food cooked in a proper manner and given them in a palatable form is too obvious to require comment. We trust the proposed system will remove one of the few just complaints which have been brought against the efficiency of the corps. Lord HARTINGTON hopes that "before long we shall have men in the corps themselves who will be able to give the necessary training," and therefore, we presume, considers the schools of cookery as merely a temporary arrangement.

Annotations.

"Ne quid nimis."

THE GENERAL MEDICAL COUNCIL.

THE General Medical Council will meet on Tuesday next, at two o'clock. We presume that the meeting will be occupied chiefly with routine business. Several instances of infamous behaviour in a professional respect have transpired of late, and may well exercise the judicial function of the Council. It is unfortunate that once more the Council meets under the most paralysing conditions, with a Bill before Parliament proposing its dissolution. It would make a good and magnanimous use of its time in expressing its satisfaction at the prospect of legislation that will restore the sense of authority in the medical profession, and terminate a system of half diplomas and unequal examinations which is unfair to the profession and unsatisfactory to the public.

THE COMING FESTIVAL OF THE EDINBURGH UNIVERSITY.

EVERYTHING betokens that the tercentenary of the University of Edinburgh will be an event worthy of the past centuries and the present prospects of the University. Men from all the leading universities of Europe are expected to lend lustre to the occasion, and not a few will return to their homes honorary graduates of the University of Stewart and Hamilton, of Syme and Alison. It is understood that some of the principal members of the profession in London will be so honoured. Much interesting speculation obtains, too, as to the State honours to be conferred on those representatives of the University work which has done so much for Scotland and for the world. We anticipate that Her Majesty will on the occasion confer some signal proof of her favour on professors and graduates of Edinburgh. As regards two or three of these, there is a consensus of expectation which we trust will be justified by events. We have only to wish that the occasion may lead to such a comparison of notes between Edinburgh and other centres of learning as to promote academic efficiency throughout Europe. The occasion will be none the less auspicious for a little criticism on all sides.

DECLINE OF ENGLISH MORTALITY AND CAUSES OF DEATH.

AT a meeting of the Statistical Society on Tuesday last a paper entitled "The Recent Decline in the English Death-rate considered in connexion with the Causes of Death," was read by Dr. G. B. Longstaff. The paper, which is an undoubtedly valuable contribution to vital statistics, forms a desirable continuation of the paper read before the same Society in April last by Mr. Noel A. Humphreys, calling attention to the import of the declining death-rate in England upon the duration of life of its population. Dr. Longstaff analyses and differentiates this decline of the death-rate in order to show the extent to which the various causes of death have contributed to this decline. Considering the amount of labour devoted to the paper, and the combination of statistical skill and medical knowledge brought to bear on a very complex problem by Dr. Longstaff, the first impression produced by the paper is tinged with disappointment. This arises in great measure from the fact that many of the results arrived at are rather suggestive than positive. More intimate knowledge of the paper, however, brings conviction of the value of the calculations and their logical deductions, which are the more trustworthy because Dr. Longstaff has been careful not to push them too far. It is clearly proved that the whole of the recent decline in the death-rate is accounted for by the decrease of mortality from the principal zymotic diseases, and from phthisis; the death-rate from all the other causes of death in the aggregate having been stationary. It is true that the mortality from many of the principal organic diseases, classed as local diseases, such as affections of the lungs, heart, brain, liver, and kidneys, show a considerable increase; but this is in great measure attributed to better diagnosis and more careful certification of the causes of death. This hypothesis is corroborated by the marked decline of the proportion of deaths indefinitely attributed to atrophy, debility, old age, convulsions, and dropsy. Dr. Longstaff inclines to the belief that the marked increase of the deaths attributed to cancer points to a real increase of mortality from this disease. The remarkable decline in the mortality from zymotic causes, especially from "fever," small-pox, and scarlet fever, is fairly claimed as a triumph of sanitary reform and improved sanitary administration. It is noteworthy that the mortality from whooping-cough and measles, which diseases have till now remained practically outside the pale of sanitary administration, has, almost alone of zymotic mortality, showed no decline during the period under review.

MR. BARON HUDDLESTON ON LUNACY LAW AND PRACTICE.

MR. BARON HUDDLESTON, at the close of the case of Mrs. Weldon *v.* Dr. Forbes Winslow, drew attention to the anomalous state of the law which renders it possible "that an order can be made by anybody on the statement of anybody, and that two gentlemen, if they have only obtained a diploma—provided they examine a patient separately, and are not related to the keeper of a lunatic asylum—can commit any person to a lunatic asylum. It is somewhat startling—it is positively shocking—that a pauper, or, as Mrs. Weldon puts it, a crossing sweeper should make a statement, and then two medical men, who never had a day's practice in their lives, and would for a small sum of money grant their certificates, may do so, and that person may be lodged in a private lunatic asylum, and that this order and this statement and these certificates are a perfect answer to any action." This is what the newspapers report Mr. Baron Huddleston to have said; and, whether or not the report be accurate, we are bound to admit that it is a fair statement of the facts. So far as the law is concerned these

possibilities undoubtedly exist. It is much to the credit of the medical profession that such facilities for wrong-doing are not often, if they are ever, abused. There is positively *no* safeguard. If a person falling under the worse than fatal influence of this disgracefully lax, though legal, system were put away in an asylum he or she would never be heard of again. Any faith which may be placed in the supervision of the Commissioners in Lunacy may be at once cast aside. That Board does not move with greater celerity than other corporations. If a sane but neurotic and excitable person were placed in an asylum, after two or three "badgerings" *secundum artem* on spiritualism and the like, each examination perhaps lasting two or three hours, it is more than probable that there would be plenty of evidence of insanity available before the Commissioners paid one of their perfunctory visits. We have nothing to qualify or withdraw of all that we have from time to time said in these columns on the Lunacy Law, and especially on the subjects of certification and private asylums. The "state of things" in regard to these matters is, as Mr. Baron Huddleston justly observed, both "startling" and "positively shocking"; but then Mr. Baron Huddleston is only a lawyer, not a law-maker. If he had to approach the subject in the last-mentioned character, either in the House of Lords or the House of Commons, he would doubtless think very differently on the same points. They would all seem admirable. If he were a Commissioner in Lunacy he would probably regard the position of affairs as simply perfect, and do his utmost to oppose all reform and ensure the permanence of the legal possibilities he admired and approved. Thus greatly do facts vary with the standpoint from which we view them.

SUMMER IN MARCH.

DOES summer in March mean, or imply, also, winter in May? The melancholy school of weather-prophets aver that such is the fact, but are we bound to accept their lugubrious vaticinations? The learnedly laboured arguments from figures, which may be facts, of the meteorologists notwithstanding, it must be evident to the perceptive faculties of the majority of middle-aged persons that during the last thirty or forty years the climate of this country has changed very considerably, and, as it would seem, permanently. We do not now get the severe winters which used to be visited upon us. Snow before or even at Christmas has become rare. March is not generally so genial a month as it has thus far proved itself—albeit the old saw may yet apply which runs, "If March comes in like a lamb, it will go out as a lion,"—but even the average weather of the third month of the year is not nearly as boisterous as it used to be. On the other hand, very hot weather in the middle of the year is not common, and the successive weeks of intense sunshine that were characteristic of a bright summer three or four decades ago are unknown to the present generation. If we do get really "hot" weather in July, it is only for a few days at a time, with interludes of almost wintry cold and wet, which dispel the idea of summer. Looking at the experience of the last few years especially, it is certainly permissible to speculate that, after the unsettling effects of a somewhat sudden though progressive change of climate have subsided, the average temperature and the "weather" generally of this island may prove to be more moderate, though perhaps not less changeful, than of old. We are, perhaps, doomed to have winter at last after the fragment of summer which has made its appearance in March; but we confess that it does not appear to us that there is any inevitable need for such an untimely visitation. In any case, we may be thankful for the genial weather which has now been vouchsafed to us. Those who have not been silly or impatient enough to cast aside their moderately warm clothing prematurely, can scarcely fail to have benefited by the week of fair weather we have just enjoyed. Beyond question it has been the means of sparing many threatened lives; and although some "irritable throats" and "weakly chests" have suffered, the effect, speaking generally, has been highly beneficial. The point of prudence to be enforced on public attention now is a reasonable measure of carefulness as to the "changes" which are almost certain to occur within the next few days or weeks. The high temperature of the recent past cannot of course be maintained. The conditions which determine temperature and climate do not admit of an entire substitution of summer for spring, not to speak of the possibly lapsed winter. It is obviously too soon to put on summer clothing, and dangerous to lay aside winter wraps. Better put up with a little of that discomfort of which we are, as a nation, peculiarly intolerant—namely, the sensation of being a little too warm,—than incur the risk of "cold." It is amazing to find people so unreasonably eager, as even sensible persons show themselves, to put on thinner clothing because the weather happens to be a few degrees warmer than usual. It is the Englishman's privilege to grumble, but when that ungainly propensity takes the form of a growl because a little exceptionally genial weather has come upon us unexpectedly, it is ridiculous and ill-timed. With a grain of common sense and a minimum of self-possession, we may not merely be content, but grateful to accept and use wisely the boon the gods have given us.

FOOTBALL ACCIDENTS.

CASUALTIES have again been frequent among football players during the past week or so. In one case it is to be feared that a fatal termination will result, it being stated that the spine was fractured. Those who approve of the game as played in the present rough-and-tumble manner must rejoice in the termination of a recent match at Oldham. From the commencement of the game much ill-feeling was apparent. In consequence of a decision of the referee one of the sides left the field, amidst the greatest uproar, and free fights were indulged in "all over the ground." The retiring side were not permitted to make their way to the dressing-room, stones and mud being freely thrown at them, while they "were in other ways assaulted." This is not the first account that has reached us of a football match degenerating into a riotous and disorderly bear-fight, the tempers of the players having evidently been aroused by the uncontrollable brutalities and roughness of the pastime. Advocates of the present system of playing the game speak highly of the manly qualities it calls forth. We reiterate that we fail to see any manly quality evoked by it. It is manifestly a game in which the stronger and heavier side has an advantage over weaker antagonists. It is, moreover, one in which injuries are frequently received which render the player incapacitated for life, and, as a consequence, too often a burden and a dependent upon his relatives for support. The selfish indulgence in an amusement which may bring such misery into a household is not, to our minds, the highest ideal of manly prowess. Certainly no man should unnecessarily expose himself to dangerous accidents unless he has adequate means of support in the event of his becoming crippled for life. Lastly, a game can hardly be considered manly which leads to constant disputes and appeals to the referee, whose decisions are not unfrequently challenged, and, as at Oldham, ends in a free fight and the disgraceful treatment at the hands of the spectators of the side visiting the town. There are many ways in which football might be much improved. It could be made more simple, and thus many disputes which now give rise to much bitterness would be avoided. By stopping the handling of the ball and running with it (in the

"Rugby" game) the dangerous form of accidents would be rendered less frequent; and if it could be so devised that the kicks fell more on the ball and less on the shins of the players, the game would become more skilful, and less brutal and dangerous.

MR. GLADSTONE AND THE HOUSE OF PEERS.

WHAT a pity it is that Mr. Gladstone does not allow himself to be persuaded to take the leisure implied in removal to the Upper House. What is more natural in his position in the House of Commons than that he should exhaust himself and contract colds which disable him for days at critical parts of the session. If the absurd customs of the House of Commons cannot be altered so as to allow its members to retire to rest at reasonable hours, it is obvious that such men as Mr. Gladstone should submit to the ordeal of translation. We can well understand Mr. Gladstone's preference for the House of which he has long been such a conspicuous figure, and failing that, for complete retirement. But his retirement is still premature. His political force is too great and his personal interest in public affairs too keen for this. He is too earnest and patriotic to lapse into political indifference. The country, therefore, would gladly hear of his removal to a House where public business is generally finished before seven o'clock. To resist such a step is hard on the public and hard on the House of Lords, which needs such reinforcements as we are now urging.

SCARLATINA AND DIPHTHERIA.

SCARLET FEVER and diphtheria have been prevalent at Poltimore, in the rural sanitary district of St. Thomas, near Exeter. Mr. Hartnoll, in reporting on the outbreak at length, refers to the intimate relationship observed between the two diseases. Some persons had a scarlatinal eruption and no sore-throat; others had inflamed throats only, with here and there a white patch; and others again suffered distinctly from membranous diphtheria. The two diseases were so interlinked that he regarded them as having a common origin, the form developed in each case depending on obscure local or personal influences. Local dampness of site is considered to have materially favoured the spread of the hybrid affection, but well-waters were found to be contaminated by house-slops and otherwise; so also overcrowding, bad cottages needing repair and cleansing, and offensive conditions of drainage were found to be associated with a number of cases. School attendance is also regarded as having contributed to the spread. The sanitary authority appear to contemplate some remedial action by giving notice week by week to owners whose properties are reported on adversely by the inspector of nuisances.

SLEEPY LAW-MAKING.

NOTHING can be more absurdly impolitic than the practice of prolonging the sittings of the House of Commons far into the night. Public business suffers not less than the health of members. The work done under these irrational conditions is bad. It must be so. Of late there has been a notable falling off in the character of Parliamentary phraseology. The deterioration of language in debate has found its way into the wording of Acts of Parliament. The judges have declared some of the recent amended sections of important Acts unintelligible. We cannot help thinking that the policy of our successive Governments, without respect of parties, is becoming muddled and mischievous, like the thoughts of a sleepy yet unrested brain. It would be well if this could be looked to before matters go from bad to worse, and the results of a growing error in management become even more manifest than they are at present.

SIR RICHARD OWEN.

ON the 15th inst. the Geologists' Association of London presented an address to Sir Richard Owen on the occasion of his retirement from the position of superintendent of the Natural History Department of the British Museum. The ceremony, most appropriately, took place in the lecture-room of the new *locale* of the department in Cromwell-road, a building which may be looked upon as a memorial of Sir Richard Owen's constant advocacy of the claims of natural science to a due recognition by the State. The address, which was read by Dr. H. Hicks, President of the Geologists' Association, was as follows:—

"On the occasion of your retirement from the position of superintendent of the Natural History Department of the British Museum, in which for many years you have done so much for the benefit and advancement of science, we, your fellow members of the Geologists' Association, desire to place on record not only our appreciation of these distinguished services, but especially our sincere thanks for the many very valuable demonstrations you have given to us in geology and palæontology while surrounded by the specimens in the British Museum. We hope that you may long pursue those studies to which your life has been devoted, with the knowledge that in your retirement you take with you the good wishes and the warm interest of all who appreciate your scientific work and your great personal kindness in communicating its results to others."

Sir Richard Owen, in acknowledging the presentation, said that the favour shown by Her Majesty, and by the Royal College of Surgeons, he regarded as a recognition of his public labours and services; but the address he had just heard read he looked upon as a mark of the approval of a large body of his fellow workers of the Geologists' Association, who had shared in the same labours in which he himself had been engaged, and as such he should ever hold it as among his chiefest treasures, to be handed down to his descendants in the hope that some of them might be moved thereby to follow in his steps and become naturalists.

PREVENTION OF BLINDNESS.

AS State Medicine has to do with the welfare of the masses, there can be no doubt that the prevention of blindness falls within the bounds of its operation. Were this statement to be disputed, it would only be necessary to quote the statistics given by Mr. John Tweedy at the last meeting of the Ophthalmological Society. The figures there rendered showed that 40 per cent. of the inmates of asylums for the blind owed their darkness to the ravages of a disease which on the best authority is one of the most manageable maladies with which medical art has to deal—ophthalmia neonatorum. Once let it be recognised that wholesale blindness can be prevented almost with certainty by the universal dissemination of a few instructions, and we cannot believe that the State will refuse its rightful aid. Dr. McKeown, in his paper on this philanthropic subject, read at the Ophthalmological Society last week, has sketched out a very simple apparatus, which, if efficiently worked, would, it seems to us, whilst not encumbering already existing machinery, confer the needed boon on suffering humanity. He proposed that the Poor-law organisation, which has equivalent bodies in each department of the United Kingdom, should undertake the work of distributing the necessary information. The instruction to the poorer classes must be given orally as well as in print. The Registrar of Births is pointed out as a fit person for imparting instruction in the case of those not reached by the Poor-law influence. The middle and upper classes, however, usually provide themselves with medical attendance at the time when the danger is at its greatest; so that well-trained medical prac-

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titioners would always be on the alert for the ophthalmia which produces so much total blindness or impairment of vision. We sincerely hope that the Committee of the Ophthalmological Society will soon have its report ready, and that the influence of the Society may make itself felt in the Councils of the Government Boards at St. Stephen's.

TRAINING OF ASYLUM ATTENDANTS.

THE subject of a more complete training for asylum attendants has for some time been in various ways under the consideration of the Medico-Psychological Association, and it was fully discussed by Dr. Campbell Clark in a paper read before the quarterly meeting recently held in Edinburgh. He had given two courses of lectures, followed by examinations, to his staff, and had obtained such decided advantages that he strongly urged his fellow-members to take similar action. He suggested also that a scheme might be adopted whereby the grading of attendants could be effected, and believed that certificates of proficiency, given in some way under the auspices of the Association, would be striven for by their best men, and accepted by superintendents as of high value. It having appeared that Dr. W. A. F. Browne, late of Dumfries Asylum, and now Commissioner in Lunacy for Scotland, had many years ago delivered a similar course of lectures, and that a paper of like import to Dr. Clark's had been read by Dr. Clouston, the meeting determined upon taking some action in the matter, and appointed a committee, which met a few days ago in Glasgow. It is likely that the scheme for providing certificated attendants will remain in abeyance; that individual superintendents will be left to supply instruction in the way they think best; but that an authoritative "Manual of Instruction of Attendants on the Insane" should be issued as a general basis for work. This handbook will contain such simple physiology as bears on the treatment of mental disease, will indicate the commoner symptoms of asylum diseases, and treat generally of the nursing, management, and care of the insane. The committee, which consists of Drs. Campbell Clark, Urquhart, Turnbull, and Campbell, have begun their work, and invite reports as to the results of such instruction to attendants as asylum physicians may have given.

THE ORIENT LINE: DIET OF SAILORS.

AT the time when the success of the first experiment in the conveyance of fresh meat from the colonies by means of cold storage was assured, we ventured to advocate the extension of the advantages thus gained to the sailors of the ships engaged in the trade. It seemed absurd that these men should be condemned to eat salt provisions when wholesome fresh meat was within their reach, and could be supplied at an equally cheap rate. The regulations of the Board of Trade are, however, so stringent that no shipowner or captain could venture to make the change without authorisation, and to obtain this, as was well known, required much zeal and great persistence. To the Orient Company belongs the credit of persuading the Board of Trade to allow the experiment to be tried, and we understand that as soon as the necessary arrangements can be made both the sailors and the emigrants on board the vessels of this line will be supplied throughout the voyage with a supply of fresh meat equal in weight to the salt junk now served out. This is a most liberal provision, since of course the new scale represents an increase of 22 per cent. of fresh meat in lieu of that quantity of salt which was added to the pickled pork and beef. The effect of this innovation on the health of our seamen, if generally adopted by the mercantile marine, will be very salutary. Many of the diseases incident to seafaring life will be obviated, and the men, being better nourished, will be able to withstand exposure and be more fit for hard work—in fact, will become in every respect more seaworthy. The Orient Company have also taken another step in a right direction, in issuing an illustrated "Guide" of their route between England and Australia. Not only are the recommendations laid down of service to the general passenger, but much useful information is afforded for the use of invalids, a considerable number of whom are conveyed every autumn by this line to escape an English winter and to enjoy an Australian summer. In the "Guide" there is a very interesting chapter on the preservation of health at sea, and also a series of thermometric charts showing the variations of temperature to which the voyager is exposed in passing from the Atlantic, the Mediterranean, and the Red Sea to the Southern Ocean, and indicating the equipment necessary for meeting the sudden change with comfort, if not for the actual preservation of health.

AN INTERNATIONAL SANITARY LEAGUE.

IN a communication addressed to the International Congress of Colonial Medical Men at Amsterdam Dr Van den Corput urges the constitution of an international sanitary league, including a permanent service for procuring official information as to the state of public health in the several States, and the creation of special stations for observations involving hygienic considerations. He is convinced that the only proper method by which the spread of infectious diseases can be checked is by the isolation of the infected persons, or what he terms "individual quarantine," and in order that this may be effected he very properly maintains that the presence of disease in one country must be publicly communicated to others, so that the latter may beforehand be prepared to meet the invasion. Dr. Corput points to the advances which are already being made in a direction which he claims first to have acted on in 1865, and to the instances of progress which he gives we would add a reference to the returns that are now periodically made by the Registrar-General as to the mortality from specified diseases in many Continental and colonial cities and towns. The establishment of such a league would unquestionably be of the utmost importance; its practicability becomes, with the ever-increasing facilities for the rapid transmission of information from distant parts, daily more evident; but we fear it could never be properly carried out except by the direct aid of the Governments of the countries who would participate in its benefits.

MR. WESTON'S FEAT.

WHATEVER inferences we draw or refuse to draw from Mr. Weston's walk, it remains one of the most surprising feats that was ever performed by man. Under any circumstances, even if exceptionally favourable, to have walked fifty miles a day consecutively for a fortnight would have been a creditable accomplishment. But to walk fifty miles a day for 100 days, in all states of the weather, of the muscles, and of the mind, and to appear at the end of it as Mr. Weston did last Saturday night, was a great achievement. It has always been a feature of Mr. Weston's powers to be slow to become exhausted and to admit of very rapid recuperation. Most men who were rash enough to attempt such an undertaking, and fortunate enough to survive it, would do so in a state of bruise and dilapidation, dragging one leg after the other. But Mr. Weston was rather like a man setting out on a summer's morning than one finishing such a walk, and actually did the last mile but one in 9 mins. 17 secs., and a few minutes after the conclusion of his task delivered a speech that would have been a day's work to some men. In less than forty-eight hours he appeared at our office in perfect health and with a quiet pulse, more like that of one returning

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from a holiday than from such a prodigious task. The mere distance walked in the time gives a very inadequate idea of Mr. Weston's power. He started with a bad cold, and he soon got a sore on the foot, which involved extreme pain and did not heal till half his journey was accomplished. Add to these the element of mental worry and anxiety, and we have three conditions that would have disabled almost any man but Weston. All this was achieved on a simple diet, without any alcohol, save as an external application to the feet. The absence of alcohol was certainly a very interesting feature of the experiment, and one that our teetotal friends may be excused for making much of Dr. Moxon's view of the use of alcohol—viz., as a thaumaturgical agent, to enable a man to do his best or to exceed himself—finds no countenance in this case. If anybody believes that Mr. Weston could have accomplished the work—to say nothing of accomplishing it better—with any material quantity of alcohol, it is not Mr. Weston himself, who in all his great walks has abstained totally. Men who cultivate physical health and strength may well consider the significance of Mr. Weston not only going through such a walk, but going through it so well, and with such an equilibrium of function at the end. And if they do not reach the extreme teetotal conclusion, they will at any rate admit that a splendid physical achievement has been wrought without alcohol. Most men, in the same way, will do their best work *best* without alcohol. Not that teetotalism will enable any man to do what Weston has done, which is essentially a personal feat. It is easy to be illogical and to exaggerate in this matter. We should fall into these errors if we said that teetotalism enabled Weston to do what he has done. It is enough to say that under teetotal conditions he did it with the least possible harm to his bodily functions; and that, after all his past achievements, he is, at forty-five, a sound and healthy man, capable, apparently, if need were, of repeating them all.

DEATH OF DR. J. HALL DAVIS.

WE regret to have to announce the death of Dr. J. Hall Davis, which took place quite suddenly on the 19th inst. Dr. Hall Davis had for some time been in failing health, suffering much from asthma, but he continued to attend to his hospital duties until quite recently, and operated at the Middlesex Hospital so late as Jan. 22nd. On the evening of that day he had a slight apoplectic seizure, which, however, completely passed off in a few days. Still, he continued very feeble, and a week ago resigned his position as obstetric physician to Middlesex Hospital. On the night of Tuesday last Dr. Hall Davis retired to bed as usual, but about 2 A.M. his friends were aroused by hearing him labouring for breath, and he passed away before medical assistance could reach him.

MAGISTRATES AND MEDICAL OFFICERS OF INFIRMARIES.

AT the recent meeting of the Lambeth Board of Guardians the medical superintendent of the infirmary reported on the case of a man whose admission to the infirmary was demanded by a magistrate, but who was ordered to the workhouse by the medical officer. After noticing the nature of the disease from which the man suffered, and the fact that his conduct during the sixty-eight times he had been under his care and the fifteen times he had been admitted since 1881 into Newington Infirmary was intolerable, Dr. Lloyd concluded as follows:—"I need hardly point out how impossible the management of such an institution as this must become if the principle is conceded of allowing unauthorised persons to use their influence and official position in overriding responsible officials." After some discussion the report was approved, and a copy of it ordered to be sent to the magistrate.

MEDICAL SERVICE IN THE SOUDAN.

IT is satisfactory to learn, on the authority of General Graham himself, that the work of the Medical Department has been very efficiently carried out in the recent proceedings in the Soudan. In a general order of March 16th, in reference to the defeat of Osman Digma, he says: "The arrangements made by the Army Medical Department for the comfort and transport of the wounded and sick were all that could be desired. Many instances of self-devotion on the part of the medical officers occurred which will not be forgotten." In the latest action fought Surgeon Prendergast, A.M.D., received a severe spear wound, penetrating the chest, while he was bending over a wounded man; Surgeon Cross, R.N., was slightly wounded in the forehead; and Private James Seager, A.H.C., was killed. In the previous action at El Teb Surgeon Turner, A.M.D., and Surgeon Martin, R.N., were slightly wounded. By the latest accounts all the wounded cases were doing well. We congratulate our naval and military professional brethren on the testimony borne by the General Commanding to their conduct in the field, and the zeal and efficiency with which they have discharged the onerous duties that devolved upon them.

THE FORTHCOMING MEETING IN LINCOLN'S-INN-FIELDS.

AT a meeting of the Association of Fellows held at Birmingham on Thursday, the 20th inst., it was resolved that the officers of the Association be authorised to state at the meeting at the College of Surgeons on Monday next, that the concessions announced by the Council include all the objects for which the Association has contended, and that it desires to recognise the readiness and grace with which the Council has granted them.

SCARLET FEVER AND SCHOOL-CLOSING.

DR. MORRIS, reporting as to the Chester-le-Street rural sanitary district, refers to an outbreak of scarlet fever at West Pelton and Pitt-hill. The prevalence was widely spread, and one single practitioner had attended some sixty cases. After consultation with the school managers the school was closed for some five weeks. At the termination of this period, the schools having in the meantime been thoroughly cleansed and disinfected, the scholars were allowed to return, all children from infected houses being still excluded. After an experience of several weeks' duration, it was found that there had been no recrudescence of the disease, the few cases that had occurred since the school was reopened being scattered ones, evidently not related to school attendance.

THE LAW OF PERAMBULATORS.

A RECENT decision at Hammersmith police-court threatens to add some degree of risk to the exercise of infants. The judgment in question regards a perambulator as a "carriage" in the legal sense, and assigns it a place on the thoroughfare with its technical relations of nobler presence—the coaches, drags, carts, tricycles, &c. We sincerely hope that in the interests of childhood the common-sense of custom may be able to carry an appeal against this somewhat grotesque though literal reading of the law.

THE SHUTER MEMORIAL FUND.

WE are asked to state that the above fund will be closed on the 31st inst. All intending subscribers should communicate at once with either of the honorary secretaries: Mr. Bruce-Clarke, 46, Harley-street, W., or Mr. Chune Fletcher, 12A, Charterhouse-square, E.C.

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MR. GLADSTONE'S HEALTH.

MR. GLADSTONE'S general condition is satisfactory, but the laryngeal catarrh continues, with great hoarseness. It is to be hoped that a few days' rest and change of air will restore the tone of the vocal organs. Meantime it is obvious that any premature attempt to work might materially defer Mr. Gladstone's recovery.

HEARING "VOICES."

SURELY, if voices which have no actual existence are "heard," or supposed to be heard, the insanity of the thing lies in the *hearing* of the non-existent voices, not in what they may be thought to say! There can be no scientific question on this point. Nothing in the whole range of mental disease is more clearly ascertained or better known than this. Yet if some of the evidence given by medical men in the Weldon case has not been wrongly reported, the insanity of hearing voices has been represented as consisting of, and being evidenced by, the absurdity of the communications alleged to be made. Much grave mischief is done and science is discredited when answers such as are reported to have been given in the recent case are deemed permissible. For example, one gentleman told the Court he knew what a "soul" was!

PATENT MEDICINES.

A BILL to restrict the sale of patent medicines has just been printed. The Bill, which is backed by Mr. Warton and Dr. Farquharson, enacts that any proprietor, vendor, or purchaser of a patent medicine may require the same to be analysed by the Pharmaceutical Society. If the medicine be found to be a poison, the Society may by resolution declare the fact, and with the sanction of the Privy Council the patent medicine named in the resolution shall be deemed to be a poison within the meaning of the Pharmacy Act, 1868. If, on the other hand, the medicine be found free from poison, the vendor may so describe it on the wrapper. Any patent medicine shall, until the Society has analysed it, be deemed to be a poison within the meaning of the said Act.

THE BRITISH MEDICAL ASSOCIATION.

THE fifty-second annual meeting will be held at Belfast on July 29th and three following days. The President elect is Dr. James Cuming of Belfast. The Address in Medicine will be delivered by Sir Andrew Clark, the Address in Physiology by Dr. Peter Redfern, and the Address in Obstetrics by Dr. G. H. Kidd of Dublin.

ON the 13th inst., at the Parkes Museum of Hygiene, Dr. Henry Veale, Deputy Surgeon-General, delivered an address on the "Organisation and Management of Field Hospitals." In the course of his remarks, Dr. Veale alluded to the necessity of improving the food-supply of armies in the field, and advocated the abolition of the bell-tent as a receptacle for the sick and wounded, and the substitution of what is known as the "Indian sergeant's tent." The address was eminently practical, and we shall next week refer to it more at length.

THE Gresham Lectures on Medicine will be delivered on March 25th and three following days. Dr. Symes Thompson will continue the subject dealt with last year, and will discuss the question of foods and their preparation and preservation, in relation with the collection comprised in the Food Section of the International Health Exhibition to be opened in May next. The last lecture will take a general survey of the departments of the Exhibition.

MESSRS. LONGMANS have announced the early publication of the following works and new editions: "Louis Pasteur, his Life and Labours," by his Son-in-law; translated under the superintendence of Professor Tyndall by Lady Claud Hamilton; "Outlines of Psychology," with special reference to the Theory of Education, by Jas. Sully, M.A., Examiner for the Moral Sciences Tripos in the University of Cambridge, author of "Sensation and Intuition," &c.; "A System of Psychology," by Daniel Greenleaf Thompson; "A Short Text-book of Inorganic Chemistry," by Professor Kolbe; translated and edited from the second German edition by Professor Humpidge; New Editions of Murchison's Works on Diseases of the Liver and on Continued Fevers,—the former revised by Dr. Lauder Brunton, the latter by Dr. Cayley.

DR. ROLPH LESLIE, of the University of Toronto and St. Thomas's Hospital, who served in the Russo-Turkish and other recent wars, has been appointed Surgeon-General of the Lower Congo. Dr. Leslie lately returned from the Congo, where he acted as physician to Sir Frederick Goldsmid's Expedition; and now he accompanies Sir Francis de Winton, who is governor of the district. Dr. Rolph Leslie was on his way home at the time of the slaughter of Baker Pasha's troops, when Dr. Armand Leslie was killed, and there have been many mistakes of identity, as both served together in three recent wars.

AT the annual general meeting of the governors of the Dental Hospital on the 12th inst. a portrait of Sir Edwin Saunders, painted by Mr. Macartney, was presented to the hospital as a memorial of the signal benefits conferred by Sir Edwin Saunders on the institution. Mr. Erichsen, the President, in an eloquent and eulogistic speech presented the testimonial, and Sir Edwin responded in appropriate terms.

THE *Cape Times* states that small-pox broke out on board the steamer *Florence* during a voyage from the Congo to Table Bay; and, alluding to the delay which occurred in ordering the steamer to a quarantine station, advocates that, if strict quarantine laws are to be insisted upon, such a station should be kept ready for any emergency.

AN epidemic of scarlet fever has broken out at Sandbach, and it is stated that there were seventy cases on the 15th inst., and several deaths have occurred. A defective water-supply and an inefficient system of sewerage are stated to have occasioned the outbreak.

SIR JOSEPH LISTER, Bart., will take the chair at the Parkes Museum on Thursday, March 27th, at 8 P.M., when Mr. Watson Cheyne will give a demonstration of all the principle types of Micro-organisms. Tickets for admission can be obtained through members of the museum.

WE hear that Dr. Joseph Coats, lecturer on Pathology at the Glasgow Western Infirmary, has recently visited Cambridge, and that he is a candidate for the Chair of Pathology at that University.

ON the 19th inst. the students at King's College presented Professor Curnow with an album, and an illuminated address congratulating him on his appointment as Dean of the Medical Faculty.

AN interesting case of dystrophy, with spontaneous shedding of the nails, occurring in a general paralytic, is recorded in the *Gazette Médicale de Paris* for March 15th.

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REPORTS OF THE GERMAN IMPERIAL BOARD OF HEALTH.[1]

II.

THE paper that follows next to Koch's is a most elaborate statistical essay on the mortality from phthisis in relation to age and sex. The figures are compiled from many quarters, and are handled in a very exhaustive way. The author, Dr. Würzburg, formulates but few conclusions, such as that throughout the Prussian States, whether in town or country, the mortality which is great in infancy falls to a minimum between five and ten years, and then rises in regular manner to the age of sixty to seventy, when it reaches a maximum. Similar results obtain in the United States and in Sweden, but England shows an exception to this rule. The mortality in Prussia and Sweden is greater amongst males; in England and the United States among females. It is higher in towns than in the country. In Prussia many variations of the relative mortality in phthisis occur in regard to locality; thus the mortality in the Eastern States is less than that of the Western.

Dr. Gaffky's article upon the occurrence of Tubercle Bacilli in the Expectoration is based on observations carried on in Fraentzel's wards in La Charité, in connexion with experiments on the effects of inhalation treatment. He has drawn up, in a tabular form, the results of the examinations which were made daily in fourteen cases, more or less advanced. The total number of examinations was 982, and bacilli were only absent on forty-four occasions. The number of bacilli varied very much; but he refrains from drawing any prognostic conclusions owing to the comparatively small number of cases examined.

Then follows an account by Drs. Ernst Schill and Bernard Fischer of their experiments on the Disinfection of Phthisical Sputa. They point out that the sputum contains the spore-bearing bacilli, and that the more resistant power of the spores renders the sputum liable to retain its infective properties, especially in the dried state, under many adverse conditions. The germicidal agents employed were the action of heat, dry and moist, boiling, exposure to the action of corrosive sublimate, alcohol, carbolic acid, sal ammoniac, common salt, arsenious acid, iodide of potassium, iodoform, and aniline water. Sputum which had been dried and kept for a variable time as well as recent sputum were severally treated, and the test of the retention or not of infective qualities rested on the results of inoculation experiments with the sputum so treated compared with the results of control experiments with the unaltered sputum. The general result of this extensive inquiry may be summed up as proving that subjection to high temperatures and actual "cooking" destroys the virulence; that corrosive sublimate and alcohol are far less efficient than carbolic acid, for exposure of the sputum for twenty-four hours to a 5 per cent. solution of the latter suffices to render it innocuous. Aniline has the same property, but it requires to be employed in far larger bulk; and therefore, not only in the matter of exposure, but also the disagreeable odour of aniline and its highly poisonous character, render it far less applicable for general disinfection than carbolic acid.

The subject of anthrax inoculation and the protection afforded by the use of attenuated virus against the spontaneous disease form the basis of researches by Dr. Koch, Gaffky, and Loeffler, in continuation of those recorded in the first volume of these reports. After reviewing the various methods of attenuation, of which Pasteur's cultivation method is the chief, these writers point out that the commonest mode of entrance of the virus is by way of the digestive tract, and that it was therefore incumbent on them to test the value of inoculation on animals who had thus ingested the virus. They found that by feeding animals with anthrax spores infection followed as rapidly as after subcutaneous injection, provided that the dose was sufficiently large; but that in many cases immunity was not conferred by inoculation against the disease arising from feeding. Such a result may explain the failure of "anthrax-vaccination" to afford absolute immunity, for although a vaccinated animal may be proof against inoculation, it may yet succumb to the virus taken into the alimentary canal.

The paper read by Dr. Hesse on the Quantitative Estimation of Micro-organisms in the Air is an example of an interesting mode of research patiently conducted. By means of suitable apparatus air was drawn through tubes coated internally with glycerine, and the development of colonies of fungi and bacteria at different parts of the tube carefully observed, the time noted at which they appeared, and their disposition at various parts of the tube under varying atmospheric conditions of locality, season, and climate. The subject is one which is worthy of further inquiry; and as the method is simple, we may hope to find it followed up by others. Some excellent chromo-lithographs depicting the masses of fungous growth in the tubes illustrate this essay.

Dr. Schutz contributes a paper upon the Entrance of Fungus-spores into the Air-passages, and the Lung Disease (pneumono-mycosis aspergillina) thereby occasioned. The paper opens with a copious historical sketch of such "mycosis" described in man and animals, and then proceeds to relate the author's personal observations upon one such affection that occurred as a fatal epidemic in a flock of geese. The lungs of the first bird examined were the seat of firm greyish-red and small greyish-yellow nodules; whilst the air-passages were filled with muco-purulent secretion. The inner surface of the air-sacs, especially the abdominal one, was coated by a greenish delicate fibrinous layer. Another bird, whose symptoms were obviously respiratory, presented cavities in the lungs containing fungus-mycelium, which was also met with in the air-sacs. Small portions of the fungus were cultivated, and it was determined to be the aspergillus fumigatus. Details are then given of experiments by feeding and inhalation, resulting in the growth of the fungus within the birds thus treated; and these results are contrasted with similar experiments with the aspergillus glaucus, which were negative. The paper concludes with references in literature to the occurrence of fungi in diseased lungs in man, mostly regarded hitherto as merely accidental concomitants. The suggestion that some of these cases may be true "mycoses" is plausible. A short description is also given of the fungus of tinea Galli, and its cultivation in nutrient fluids and gelatine.

Then follows a very elaborate report, by Drs. Fischer and Proskener, upon chlorine and bromine as disinfectants. It is not possible to analyse this in detail here; suffice it to say that the experiments are based upon the subjection of a very large number of various kinds of micro-organisms to the vapours of these substances. As to chlorine, a valuable disinfectant most appropriately used under certain circumstances, it is much to be preferred to sulphurous acid, which is far less effective. The chlorine should be concentrated, and it is calculated that the cost of materials is about fifteen pfennigs per cubic metre of the gas. It is also essential for thorough disinfection that the air be laden with moisture, and the room to be disinfected be exposed to the gas for some twenty-four hours. The great objection to chlorine is its inapplicability to the disinfection of clothing and other fabrics. Bromine gives good results, but is even more detrimental to fabrics, besides being more costly than chlorine.

Reserving for future notice Dr. Hueppe's article on Lactic Fermentation and that by Dr. Loeffler on Diphtheria, we may conclude this article with a review of the interesting contribution of Dr. Gaffky on the Etiology of Typhoid Fever. It opens, like all these reports, with a concise history of previous research after specific organisms in this disease, amongst which the observations of Eberth, Meyer, Klebs, and Koch are the chief, each of them, too, claiming to have determined the presence of a bacillus. Dr. Gaffky's research is based on a microscopical examination of the organs from twenty-eight cases. The detection of a bacillus seems to depend somewhat on the stage of the disease. In the intestine, it is easiest in the stage of infiltration, but when ulceration is in progress the liability to confusion from the presence of putrefactive bacteria is great. However, the spleen, liver, kidneys, and mesenteric glands also harbour the bacillus, and its presence in one or other of these organs is conclusive. The mode of preparation is to immerse the sections of the organs (which have been hardened in alcohol) for twenty-four hours in a saturated aqueous solution of methyl-blue, then wash them in alcohol, and having cleared them with oil of turpentine to mount them

[1] Reports of the Imperial Board of Health. Edited by Dr. Struck, Director. Second Volume. (Mittheilungen aus dem Kaiserlichen Gesundheitsamte. Herausgegeben von Dr. Struck, Geheimen Ober-Regierungsrathe, Director des Kaiserlichen Gesundheitsamtes. Zweiter Band.) Berlin: Hirschwald. 1884.

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in Canada balsam. In only two out of the twenty-eight cases were no bacilli found in these organs, and in one of these cases they were met with in an intestinal ulcer, the other case being one of perforation at the end of the fourth week. He also alludes to two other cases not included in the above, one in which death occurred after the intestinal ulcers were healed, and the other which presented the clinical and anatomical features of typhoid, and was fatal in the third week. In this case micrococci were found in abundance, but no bacilli. The bacillus is in length about one-third the diameter of a red blood-corpuscle, and is three times as long as it is broad. It often exhibits spores, and it is found in the infiltrated follicular glands, in the spleen, liver, kidney, and mesenteric glands, as well as more sparsely in the lungs. It can be cultivated outside the body, hitherto without much success, probably from imperfection of methods, and especially from experimenters not taking care to isolate the organism previously. Gaffky has made many pure "cultures," and is satisfied that this bacillus is distinct from other pathogenic forms. It is motile; does not stain well with aniline; in gelatine it does not tend to spread, and never causes liquefaction, as so many of these bacteria do; its colonies have a yellowish colour. It can also be cultivated on the surface of boiled potato, and in sterilised blood serum, showing definite macroscopic characters. Attempts to cultivate it from the stools failed because of the interference of the other bacteria in these ejecta. Nor did he succeed in cultivating it from the blood of typhoid patients. The question whether typhoid fever can be transmitted to the lower animals has long been the subject of experimental inquiry, and almost invariably the result has been negative. It might be thought that by the use of these cultures as the inoculating agents greater chance of such transmission was afforded; but Gaffky experimented, by inoculation and feeding, on monkeys, guinea-pigs, rats, mice, rabbits, and other animals without once producing typhoid lesions. A calf fed repeatedly with the cultivated bacilli, and killed six weeks after the last infection, presented not the slightest trace of intestinal affection. These failures are not held to disprove the etiological importance of the bacillus, which was not found by Eberth in twelve cases of intestional tuberculosis, and the occurrence of which in such large abundance in the intestines in the earlier stages of typhoid fever is suggestive. It is contended that the evidence is not weaker than that afforded by leprosy and relapsing fever; in all these diseases there is the presence in the blood or tissues of an organism having special characteristics, and not found in any other disease; but as yet in neither has the causal connexion been proved; whereas in splenic fever, tuberculosis, glanders, and erysipelas, the specific micro-organisms have been experimentally shown to be capable of exciting the characteristic lesions. Are then, he asks, the typhoid bacilli to be regarded as specific pathogenic organisms? He is decidedly of opinion that they are; and he shows how the study of the characters of the bacillus, and the analogies of other diseases, afford no ground for believing that this bacillus can be evolved from non-pathogenic putrefactive bacteria. Since the lower animals resist infection, it is not possible to say whether the virus can be artificially attenuated; but the notorious variations in severity of epidemics point to this as a possibility. It is likely that outside the body the typhoid germ may long remain in the form of "resting spores," but it is also probable that under certain conditions they multiply and develop as the anthrax bacillus does apart from the intervention of the human organism. In discussing their mode of entrance into the human body he points out that the main body of evidence favours their introduction into the alimentary canal, mainly through the medium of drinking water, but also by contaminated food, and by the inhalation (into the mouth) of dust carrying the germs. It is not, however, quite possible to exclude inhalation into the lungs. Appended to this paper is a description of an epidemic of typhoid in a garrison at Wittenberg in 1882, where the source of infection was clearly traced to contamination of the water-supply.

MME. BROCA offers a prize of 1500 francs, to be given by the Anthropological Society of Paris, for the best memoir on a question concerning human anatomy, comparative anatomy or physiology, bearing on anthropology. The first prize will be awarded in April next.

THE MEDICAL BILL IN COMMITTEE.

WE are just able to report the passage of this Bill through Committee, with no material opposition. Lord Balfour of Burleigh, on behalf of the Scotch universities, raised some slight objections, at which the Lord President expressed some surprise. A very noticeable feature in the discussion was the earnest appeal of the Duke of Richmond to the Government to use every effort to carry out the long expected legislation, and the equally earnest response of the Lord President.

VITAL STATISTICS

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 6193 births and 3796 deaths were registered during the week ending the 15th inst. The annual death-rate in these towns, which had been equal to 20·3 and 22·5 per 1000 in the two preceding weeks, further rose to 22·6 last week, and was higher than in any previous week of this year. The lowest rates last week were 15·2 in Plymouth, 16·2 in Cardiff, 17·1 in Brighton, and 17·3 in Derby. The rates in the other towns ranged upwards to 29·7 in Blackburn, 29·8 in Leeds, 29·9 in Birkenhead, and 30·5 in Manchester The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 407 and 449 in the two preceding weeks, further rose to 502 last week, and exceeded the number returned in any previous week of this year; they included 160 from whooping-cough, 146 from measles, 81 from scarlet fever, 40 from "fever" (principally enteric), 38 from diarrhœa, 20 from diphtheria, and 17 from small-pox. The increase of zymotic fatality in the past two weeks has been due to whooping-cough and measles. No death from any of the principal zymotic diseases was recorded last week in Plymouth, whereas they caused the highest death-rates in Oldham and Blackburn. The greatest mortality from whooping-cough was recorded in Newcastle-upon-Tyne, London, and Bolton; from measles in Oldham, Portsmouth, and Nottingham; from scarlet fever in Newcastle-upon-Tyne, Leeds, and Sheffield; and from "fever" in Blackburn, Hull, and Birkenhead. The 20 deaths from diphtheria in the twenty-eight towns included 14 in London, and 2 both in Salford and in Leeds. Small-pox caused 11 deaths in London, 2 both in Liverpool and in Sunderland, and 1 both in Sheffield and in Newcastle-upon-Tyne. The number of small-pox patients in the metropolitan asylum hospitals and hospital ships, which had steadily increased in the four previous weeks from 97 to 149, was 148 on Saturday last; 21 new cases were admitted to these hospitals during last week, against 20 and 31 in the two preceding weeks. The Highgate Small-pox Hospital contained 7 patients on Saturday last, 2 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 334 and 384 in the two previous weeks, were 370 last week, and were 127 below the corrected weekly average. The causes of 87, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Newcastle-upon-Tyne, Sunderland, and in three other smaller towns. The largest proportions of uncertified deaths were recorded in Norwich, Bolton, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 20·9 to 23·3 per 1000 in the two preceding weeks, declined again to 20·9 in the week ending the 15th inst.; this rate was 1·7 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 15·9 and 16·4 in Dundee and Leith, to 23·2 in Glasgow and 25·0 Paisley. The deaths in the eight towns included 80 which were referred to the principal zymotic diseases, against 84 and 81 in the two previous weeks; 22 resulted from whooping-cough, 17 from diphtheria, 13 from diarrhœa, 12 from measles, 9 from "fever," 7 from scarlet fever, and not one from small-

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pox. The rates from these diseases in the Scotch towns last week ranged from 0·0 in Perth, to 4·2 in Dundee and 4·5 in Paisley. The 22 deaths from whooping-cough showed a decline of 9 from the number in the previous week, and included 16 in Glasgow, 4 in Edinburgh, and 2 in Aberdeen. The 17 fatal cases of diphtheria, however, showed an increase of 5; 6 occurred in Dundee, 5 in Glasgow, and 3 in Edinburgh. Of the 12 deaths from measles, 4 were returned both in Glasgow and Paisley, and 3 in Edinburgh. The deaths referred to "fever," which had been 15 and 8 in the two previous weeks, were 9 last week, of which 4 occurred in Glasgow, 3 in Edinburgh, and 2 in Leith. Five of the 13 deaths attributed to diarrhœa were returned in Dundee; and the 7 fatal cases of scarlet fever included 3 in Edinburgh and 2 in Leith. The 98 deaths referred to acute diseases of the respiratory organs in the eight towns showed a further considerable decline from recent weekly numbers, and were so many as 79 below the number returned in the corresponding week of last year. The causes of 71, or more than 14 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 25·7 and 26·0 per 1000 in the two previous weeks, further rose to 27·4 in the week ending the 15th inst. During the first eleven weeks of the current quarter the death-rate in the city averaged 27·9 per 1000, whereas it did not exceed 20·3 in London and 20·7 in Edinburgh during the same period. The 184 deaths in Dublin last week showed a further increase of 9 upon the number in the two previous weeks, and included 13 which were referred to the principal zymotic diseases, against 15 and 12 in the two previous weeks; 4 resulted from "fever" (typhus, enteric, and simple), 3 from scarlet fever, 3 from whooping-cough, 2 from diarrhœa, 1 from measles, and not one either from small-pox or diphtheria. These 13 deaths were equal to a zymotic rate of 1·9 per 1000, the rate from the same diseases being equal to 3·4 in London and 3·8 in Edinburgh. The 4 deaths from "fever" and the 3 from scarlet fever corresponded with the numbers in the previous weeks, while those from whooping-cough showed an increase of 1. Six of the deaths were referred to violence; and the deaths both of infants and of elderly persons showed an increase upon those in the previous week. The causes of 33, or nearly 18 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Edwin Wilson has been granted retired pay, with the honorary rank of Brigade Surgeon.

INDIA OFFICE.—The Queen has approved of the retirement from the Service of the undermentioned officers:—Brigade Surgeon William Watson, of the Bengal Army; Brigade Surgeon Benjamin Williamson, of the Madras Army; Surgeon-Major W. Pierce Kelly, of the Madras Army.

BENGAL MEDICAL ESTABLISHMENT.—Brigade Surgeons Philip Warren Sutherland and Alfred Eteson, M.D., to be Deputy Surgeons-General; Brigade Surgeons Henry King, of the Madras Army, and Alfred Sanderson, M.D., of the Madras Army, to be Deputy Surgeons-General.

MADRAS MEDICAL ESTABLISHMENT.—Surgeons-Major John McNeale Donnelly, M.D., and James Kees, M.D., to be Brigade Surgeons.

ADMIRALTY.—The following appointments have been made:—Deputy Inspector-General of Hospitals John Fisher, to Hong Kong Hospital, vice Deputy Inspector-General of Hospitals W. L. Gordon; and Deputy Inspector-General of Hospitals Doyle M. Shaw, C.B., to Plymouth Hospital, vice Fisher; J. F. Donovan, M.D., to the *Duncan*, vice M'Adam; Surgeon Robert H. Nicholson, to the *Albacore*, vice Armstrong; Surgeon William Hayes, to the *Royal Adelaide*, vice Nicholson.

RIFLE VOLUNTEERS.—20th Lancashire (2nd Manchester): John George Saville, Gent., to be Acting Surgeon.—2nd Nottinghamshire: Surgeon and Honorary Surgeon-Major Samuel Job resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement; Frederick Henry Appleby, Gent., to be Surgeon.

Correspondence.

"Audi alteram partem."

MEDICAL PROTECTION FOR THE INSANE: IS IT SO?

To the Editor of THE LANCET.

SIR,—I have read the remarks which gave rise to this question in THE LANCET of February 23rd; the letter of Dr. Sankey in that of March 8th; and the further annotation on the same subject in last Saturday's issue entitled "Medical Protection for the Insane."

I should not have ventured to ask permission to intrude upon your valuable space on the question unless it had appeared to me that some misapprehension had arisen with regard to the purport of the remarks reported to have been made by Mr. Justice Stephen at the Glamorgan Assizes, which a few words of explanation concerning the practical working of some portions of the Lunacy Acts may tend to remove, and show that the remarks are quite consistent with the existing facts.

Mr. Justice Stephen is reported to have said that "a law exists which allows persons charged with a crime to be confined in an asylum under the certificates of 'two' medical men, and be thus protected from the courts," and it appears to be inferred from the fact of "two" medical certificates being named that the asylum to which such a person would be sent could not be a public one; but I think I shall be able to show that under certain conditions this apparent anomaly is possible.

The larger number of public asylums in England and Wales, containing by far the largest portion of the insane population of this division of the United Kingdom, are the county and borough asylums; and all the patients sent to those institutions as "paupers" are sent on one medical certificate only; but, if I am not mistaken, some of these institutions also receive "private" patients, and in such a case "two" medical certificates would be required for them. But, besides the county and borough asylums, there are other asylums, generally defined as "public," to which "private" patients are sent, such as the various lunatic hospitals, and in the case of these also two medical certificates are required. In his letter Dr. Sankey refers almost wholly to crimes committed by patients already under care in a public asylum, and quotes cases in illustration from his own very large and varied experience; but it appears to me that the remarks of Mr. Justice Stephen are capable of a much wider and more important application in the administration of justice than this, and, as justly remarked in the annotation in your issue of the 15th inst., "a distinction must be drawn between a person already certified and one certified between the commission of an alleged crime and the issue of a summons for his arrest." As to this, the few observations I have to make, I think, practically tend to confirm the dictum of Mr. Justice Stephen, and to lead to the conclusion that the question put should be answered in the affirmative, that "it is so." For it is probably of no uncommon occurrence that something of the following kind takes place. A person, whilst still at large, but labouring under delusion, hallucination, or mental disturbance of some kind, commits a crime. This person, be he rich or poor, is arrested for the crime, and in due course is brought before a magistrate, or other judicial authority, for examination. In the ordinary course of things under such circumstances, a "sane" person would either be dealt with summarily or committed for trial; but at this point the so-called medical protection by "two" medical certificates or "one" medical certificate may be brought into force on behalf of an "insane" person, especially if the crime committed is not of a very serious character; and there follows neither summary sentence nor committal for trial, but something of the following kind probably takes place instead. If a poor man, he is put under the care of a relieving officer, and after examination by a medical man, he legally becomes a pauper lunatic, and is thus eligible for removal to the county pauper lunatic asylum as an ordinary patient, not as a criminal lunatic; but if the person committing the crime happens to occupy a superior position in life, is clearly insane, and friends are willing to come forward on his behalf, they may be permitted to perform the same function as that of relieving officer in

the case of the poor man. At the discretion of the magistrate, or other judicial authority, the person is given over into the charge of those friends who undertake to be responsible for his proper care and treatment. "Two" medical certificates are forthwith obtained in this case. An order is made by one of the friends for his reception into a private asylum, or to one of the public asylums, and he is removed there as an ordinary private patient, eligible for discharge on his recovery, at any time this may occur.

I am, Sir, yours faithfully,

West Malling, Kent, March 17th, 1884. JAMES ADAM, M.D.

RECURRENCE OF MEASLES.

To the Editor of THE LANCET.

SIR,—The prevalence of measles at the present time induces me to send you the following particulars as showing at what an early period the disease may recur.

On December 10th S. H——, aged nine years, was suffering from headache and feverishness; on December 14th he had all the characteristic symptoms of measles. He made a good recovery, and on January 18th he went to stay at his father's country house in Sussex. On February 5th he returned home much benefited by the change. He was put to sleep in the same room which he had occupied during his illness. This room had been thoroughly cleansed, ventilated, and disinfected by the daily use of terebene during his absence. All the necessary precautions had been taken with the various articles of clothing and bedding which he had used in his first attack. On February 24th, nineteen days after his return home, and seventy-six days after the commencement of his first attack, he began to complain of not feeling well. On the following day he had catarrhal symptoms, and on the next day (February 27th) he began to cough. On the 28th he had a slight papular eruption about the forehead and cheeks, which by the 29th had assumed the characteristic appearance of measles, with the suffused eyes, coryza, and bronchial catarrh attendant upon it. This second attack has been less severe than the first. During the first illness neither his brothers nor his sisters were attacked, but now his little sister, aged eleven years, has developed measles with very marked severity. To-day she is thickly covered with the rash.

I am, Sir, your obedient servant,

S. H. BYAM.

Westbourne-place, Eaton-square, W., March 11th, 1884.

HEALTH AND EDUCATION.

To the Editor of THE LANCET.

SIR,—When I proposed to the council of the health department of the Social Science Congress at Huddersfield that the question of the alleged over-pressure in our schools should form one of the subjects for discussion, I did not anticipate that the country would so soon be aroused to its very great importance. The rapid ripening of public opinion is due to the initiation of the Social Science Association, and affords another instance of the value of this Society in bringing to the front great social problems and in helping on reforms. The time has now come for action and for some practical suggestions as to the best method of remedying the defects in our present educationary codes and methods. I believe we may take it for granted, first, that over-pressure does exist, pressing both on pupils and teachers; and, secondly, that the Education Acts should be altered, especially in relation to grants and the method of obtaining them. The following are a few points which, in my opinion, have not been sufficiently considered in the valuable papers which have been published on the subject.

1. The school age in the Elementary Education Act is fixed at five years. Is this too early an age? Is anything gained by commencing so soon? The working classes have to send their children to school at five years of age, otherwise the school-board officer interferes. This compulsory attendance is not enforced in other classes of society. Is this fair? Should it not be enforced? In discussing this question we must bear in mind that it is often an advantage to mothers to have their children taken care of a certain number of hours during the day. It gives them time to attend to household work.

2. If five is too early an age, what should be the age? Seven appears to be the favourite age at which a large number of those who are outside the Education Acts commence the education of their children. There cannot be a doubt that at seven years the brain is stronger and more capable of receiving impressions. Those who begin at seven acquire more quickly and outstrip very soon children who have commenced at five. This is the experience of a large number of parents to whom I have spoken on the subject.

3. The regulation of school hours. Are the hours too long, or what should be the hours?

I might mention several other questions which ought to receive attention whilst the subject of health and education is under consideration. Should the proposed Society of Medical Officers attached to Schools be formed, from the combined experience of these officers great good would result, and many of the health questions affecting education would receive full discussion. I trust that by-and-by medical officers will be attached to all our School Boards. The sanitary aspects of the Education Acts will then be still better looked after. The aim of medical men is not to impede education, as some of our opponents imagine. Our sole desire is to place it on a proper footing, so as to secure not immediate but remote advantages—to protect the weak, to conserve the strong, so that in the future the advantages gained from a system of education carried on under sanitary regulations will be all the more lasting and beneficial to the classes interested and to their country.—Yours truly,

Halifax, March 8th, 1884. T. M. DOLAN, M.D., &c.

BIRMINGHAM.

(From our own Correspondent.)

PAGE *v.* HARRISON.

THE above case, recently tried before Mr. Justice Hawkins, was one in which a medical practitioner of Solihull, near Birmingham, sued an accountant for slander. The case presented features which made it regrettable that it should have come into a court of law, and that the privacy of domestic relations should be held up to the public gaze. A verdict was given for the plaintiff, the damages being £150. Certain costs, however, were disallowed. It sems that, if a verdict were recorded on this side at all, the damages very inadequately represented the grievance complained of, and will be more than absorbed in the expensive litigation the suit entailed. It is necessary for society to have protection, but it is also essential that the practice of the profession should be guarded against careless aspersions or observations thrown broadcast across the path of the practitioner. In this instance we have an illustration of the trouble and difficulties involved in appeals to the law, and the scant satisfaction from a pecuniary point of view that even success involves.

THE QUEEN'S HOSPITAL.

The annual meeting of the governors of this institution was held on the 10th inst. The report showed a condition of activity, in so far that there were nearly 2000 more cases treated than in the previous year; the aggregate being—in-patients 1812, out-patients 18,172, or nearly 20,000. The financial state of the hospital, unfortunately, is not so flourishing, doubtless owing to the general depression in trade, which affects more or less most charitable institutions throughout the country. The accounts showed an excess of expenditure over income for the year of above £1394, bringing the deficiency at the present time up to over £2943. It is a noteworthy fact that of the year's income, £1600 was derived from the working classes—namely, in the form of Hospital Saturday collections and registration fees, the latter amounting to £676. It is an open question how far a hospital must be considered as free which imposes a protection duty in the way of registration fees, though this is perhaps a less objectionable mode of raising money than that recently adopted at a large metropolitan hospital; at any rate, it yields a substantial amount towards the working expenses, and could hardly be dispensed with in the present state of the funds.

THE CHARGES AGAINST BIRMINGHAM PARISH MEDICAL OFFICERS.

The official inquiry into the allegations against district medical officers of the parish of Birmingham, with regard to

discrepancies in the returns relating to out-door pauper lunatics, will commence in the board-room at the parish offices on Monday next, the 24th inst., at 10 A.M., before Mr. Henley, Local Government Board inspector.

NEWCASTLE-ON-TYNE.

(From our own Correspondent.)

SUNDERLAND PROVIDENT DISPENSARY.

THIS appears to be a very popular and successful institution. It was established in 1879. The first year its income was about £700, while last year it reached nearly £1140. In 1879 the medical staff only received £156, while last year the amount was £588; this was stated to be due to the rapid increase of members and more economical management. A statement as to the amount of work done by each member of the medical staff, and the scale of remuneration for it, would have been satisfactory, but it does not appear to have been mentioned in the report, at least in that published in the newspapers. The payments for admission are—for an adult 1*s.* 9*d.* and 4*d.* per month; for a man, his wife, and family, 2*s.* 5*d.* (no matter how many children), and a monthly payment of 1*s.*, the age of the children being limited to fourteen. Masters or mistresses may enter their servants *ex officio* on payment of 5*s.* per year, a change of servants not rendering membership invalid. In the constitution of the committee the infirmary and the medical staff appear to be well represented.

"HEALTHY HOMES" AT SUNDERLAND.

Our townsman, Dr. Drummond, has been lecturing at Sunderland on "Healthy Homes." The lecture has been given under the auspices of the Ladies' Sanitary Institution. The subject was ably treated by Dr. Drummond, and was well illustrated by diagrams. He very strongly condemned "made ground" as a fruitful source of impurity and disease. In one respect Sunderland is a fortunate town, as it has enjoyed almost simultaneously two courses of sanitary lectures, the one promoted by the medical officer of health, and the other by the Ladies' Sanitary Institution. These lectures may be considered opportune, seeing that the town is suffering from an epidemic of small-pox at the present time; at least, the last report gives ninety-two fresh cases as having occurred in the last fortnight, with fourteen deaths; likewise three deaths in one family from diphtheria. A lay writer in one of the Sunderland papers, while admitting the value of lectures on sanitary subjects, especially at a time like the present, very properly points out that the corporation, which is notoriously a very inert body as regards health matters, might do something by a daily flushing of the town sewers with lime and water, both of which are abundant in the place.

SURGEONS AND POLICE CASES.

Dr. Beattie the other day did good service in drawing attention to a custom that would appear rather prevalent in Sunderland. He was called in to a case of suicide by poisoning with carbolic acid; he attended for several hours, and was surprised to find himself quite superseded by the police surgeon. Dr. Beattie complains that, if a surgeon hesitates to go to a poisoning case, he lays himself open to a charge of inhumanity and a "censure" from the coroner's jury—a practice rather indulged in at Sunderland inquests; while, if he attends, he finds the bare mention of his services, not to say "honour" of attending, wrested from him. I fear, however, that surgeons in other towns can sympathise with Dr. Beattie in his complaint.

FRIENDLY SOCIETIES' SPECIAL SERVICE.

A very important movement has taken place among the representatives of the various Friendly Societies of Sunderland with a view to promote a special service for the working classes, with collections after the manner of Hospital Sunday, to be devoted to the Sunderland Infirmary and the Sick Children's Hospital. The mayor is expected to preside at the first service, at which special addresses are to be delivered by eminent ministers and laymen. Its scope, however, might well be enlarged by taking in the Eye Hospital.

DEATH FROM LEAD-POISONING AT JARROW.

At Jarrow, the other day, an inquest was held upon the body of a female lead-worker, and a verdict of "Death from chronic lead-poisoning" was returned. The coroner said that the Government inspector had pointed out to him that, while the employers were not to blame, a great advantage would be derived by the women employed in the factories if they underwent at different intervals of time an examination, in order to determine whether or not they were in a fit state to continue at work.

Newcastle-upon-Tyne, March 17th, 1884.

SCOTTISH NOTES.

(From our own Correspondent.)

UNIVERSITY OF EDINBURGH TERCENTENARY.

THERE seems to be considerable irritation among the students of the Edinburgh University, and a feeling that their claims to participate in the tercentenary celebrations are likely to be slighted by the authorities. It would be very undesirable that any such feeling should be possible on the occasion of such an interesting fête. There is no doubt that the students are the backbone of the University, and it would be a great mistake to turn the ceremonial into a glorification of the professors and their distinguished guests, regardless of the very evident rights of the students. They are, indeed, according to the "provisional programme" now issued, to be allowed to provide amusements for the magnates—to give a ball, a concert, a dramatic entertainment, and a torchlight procession; but it would appear that they are only to be allowed a share in a "limited number of tickets, along with ladies and others," for the honorary graduation ceremonial, which will be the central event of the celebration. It is to be hoped that the framers of the "provisional programme" will lose no time in altering this manifest injustice.

ABERDEEN ROYAL INFIRMARY.

At the quarterly meeting of the governors of this institution, held a few days ago, besides the intimation that the infirmary had now been provided with two ambulances, chiefly through the exertions of Dr. Urquhart, there were one or two items of interest in the programme of business. Professor Struthers made a motion in favour of competitive examination for the position of physicians' and surgeons' assistants. Dr. Struthers had evidently noticed that the current of feeling was entirely against the proposed change, and he offered to substitute a suggestion that the matter should be considered by the medical officers. For one reason or another little countenance was given to the suggestion, and happily the over-examined students will be thus relieved of another day of horrors. For many years these young men have been selected from the cream of the school, and the existing arrangement works admirably. Notwithstanding the exertions made during the past year to increase the permanent revenue of the institution, the directors have again to intimate a deficiency in the year's accounts of £660. This question becomes of serious interest not only to the infirmary, but to the medical school, as all who wish well to the latter are anxious to see an extension of hospital accommodation, with further room for the separation of cases, and these reforms cannot be brought about without a largely increased expenditure. With a view to future economy, it has been agreed to remit to the committee of management to inquire into the cause of the increasing expenditure beyond the income of the hospital, and how this can be prevented in the future, and to report not later than next quarterly court.

PERTH WATER-SUPPLY.

Dr. Andrew Wilson, in one of his recent health lectures to the people of Perth, strongly condemned the existing water-supply of their city. He pointed out the evident disadvantages of drinking water taken from the river into which the sewage of the city had previously been poured, and the mixture twice daily floated back over the filter beds by the action of the tides. The medical men of Perth have been at last heard for their much speaking, and now something is to be done. The abuse that has been diligently heaped upon them in the past will count for nothing if they can secure for their patients and themselves a drinking water that is above suspicion, as every potable water ought to be.

[The gentleman who, in the Scottish Notes of the 1st inst., was spoken of as being likely to command the votes of

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the Liberals of the county of Ross at the next election is, we are informed, possessed of the Durham M.D. degree in addition to the F.R.C.S. Ed., and should therefore have been described as Dr. (not Mr.) Roderick Macdonald.]

IRELAND.

(From our own Correspondent.)

QUEEN'S COLLEGE, CORK.

A MEETING of upwards of one hundred students connected with this College was held a few days ago, when certain resolutions were adopted, and a committee appointed to carry them out. The meeting was held to protest against fees being charged for a course of lectures on anatomy, which it is alleged are not required. The charter of the Royal University provides that students for the M.B. degree shall attend two courses in practical anatomy; but in the Queen's College, Cork, third-year's students who may require to dissect are obliged to pay for a third course of lectures in anatomy, besides the fee for dissections, although the certificate is practically useless.

Last week several of the students attached to this College were summoned before the Council to explain their action during the late election in reference to certain letters which appeared in the newspapers, and to a meeting held condemnatory of the institution. After considering the matter, the authorities on Tuesday last sentenced the principal ringleaders to various punishments, and inflicted fines varying from £30 to £1. The chairman of the said meeting, besides forfeiting his College fees, has been rusticated for one year and a half, and Mr. Hennessy, a senior scholar, was fined £30, the balance due on his scholarship. These penalties are very severe, but if the discipline and management of the College are to be carried on efficiently, the hostility shown by a section of the students could not be passed over. There will be an appeal to the Visitors, when the entire circumstances of the affair will be made public.

DESCRIPTIVE AND SURGICAL ANATOMY OF THE INGUINAL AND FEMORAL REGIONS.

A very excellent monograph on Hernia has been published by Mr. Edward Ledwich, lecturer on anatomy in the Ledwich School of Medicine. The author is a very successful private teacher, and is attached to the institution which was principally founded by his relative, the late Mr. Ledwich, and called after that gentleman, who was a joint author of the work on anatomy which is so well known in Dublin. Hernia is a subject which presents many difficulties to the anatomical student; and Mr. Ledwich has described in a very lucid manner each region with its parts and structures followed by its appropriate dissection; so that the volume must be regarded as one of considerable utility. The illustrations, without which the monograph would be incomplete, have been prepared from drawings of dissections made by the author.

BANK OF IRELAND MUTUAL MEDICAL FUND.

In consequence of Dr. Kirkpatrick having resigned, an election for a medical officer to this fund will shortly take place. The candidates for the post include about half a dozen hospital surgeons. The subscription of the members is £1 yearly for unmarried men, and double that amount for those married, the medical officers in the latter case being obliged to attend husband, wife, children, and servants whenever required.

It is stated that the Royal University and the University of Dublin have appointed a joint committee to watch the progress of the Medical Bill now before Parliament. Prof. Macalister and Mr. Meredith will act for the Royal University, and Prof. Galbraith and Dr. Haughton for the University of Dublin.

Dublin, March 18th.

PARIS.

(From our Paris Correspondent.)

ASPHYXIA AND ACCIDENTS FROM CHLOROFORM.

DR. BENJAMIN HOWARD lately gave a demonstration at La Pitié Hospital, in the wards of Professor Verneuil, of the mechanical treatment of asphyxia and accidents from chloroform. The following is a summary of the demonstration, which is the same as previously given by Dr. Howard before the Royal Medical and Chirurgical Society of London:—"1. The drawing out of the tongue, as is generally resorted to in such cases, is not sufficient to raise the epiglottis, the anatomical conditions of the parts being opposed to the production of such a result. 2. The raising of the epiglottis can be effected in only one way, and that is by placing the head and neck in the position of forced extension. This position, according to Dr. Howard, results in the separation of the tongue from the pharynx, the widening of the calibre of the latter, and of thus establishing a free and large passage, without any obstruction, from the nose to the lungs." Great interest was manifested in the demonstration; and Professor Verneuil made some judicious remarks, in which he acknowledged the correctness of Dr. Howard's views, and pointed out the great utility of putting them into practice in preference to the methods in vogue in the treatment of the cases referred to. The same demonstration was repeated by Dr. Howard on Saturday, the 15th inst., at the Salpétrière, in the wards of Professor Charcot, and with equally satisfactory results.

REFORMS IN THE LUNACY LAWS.

Professor Ball, in supplementing the report of the Commission on the new law relating to lunatics, made a very important communication to the Academy of Medicine at its meeting of last week, and took the opportunity of suggesting two very important reforms in the present system of recruiting for the medical staff of the institutions specially devoted to the treatment of mental affections. Professor Ball proposes the introduction of the concours, as for the appointment of agrégés and physicians and surgeons to the general hospitals, and the addition in the curriculum of medical studies at the Faculty of Medicine, of special instruction on the pathology and treatment of this class of affections. Professor Ball was induced to make these propositions by the fact that at the examinations for the doctorate the candidates were generally found lamentably ignorant of this branch of pathology, and whenever a question was put on the subject, the answer almost invariably was, "I never studied mental affections." Such a state of things, the learned academician added, should not be allowed to continue, and he urged the Academy to use its influence to have the desired reforms introduced as soon as possible in the interest alike of patients and of the profession.

REGULATIONS FOR PRACTICE IN FRANCE.

The proposition relating to the practice of medicine in the French territory, and which was submitted to the Chamber of Deputies, has just been published, but space will not permit me to give more than a brief extract of the thirteen articles contained in the proposition. No person can practise medicine in the territory of the French Republic without being provided with a regular diploma from one of the Faculties of the State. This does away with the grade of officier de santé, though it will not affect present incumbents. At the end of six years, however, the latter will be required to undergo two further examinations and to compose a thesis to enable them to obtain the degree of Doctor of Medicine. The law concerning foreigners will also be very stringent, as no foreigner, notwithstanding the qualifications he may have obtained in his own country, will be allowed to practise medicine in the French territory without having passed all the examinations for the doctorate, including the thesis, and submitting a certificate of good conduct.

ANÆSTHESIA FROM ETHER AND AIR.

Dr. Dumontpallier read a paper at a recent meeting of the Société de Biologie on some experiments performed by M. Paul Bert, in which the latter produced anæsthesia by a mixture of ether and air. The result showed that when dogs were made to inhale a mixture of these two elements the animals died at periods of time varying with the proportion of ether contained in the mixture, as shown by the following table: Death is caused in two hours and twenty-five minutes with a mixture of twenty grammes of ether to 100 litres of air; at the end of two hours and fifteen minutes with a mixture of twenty-five grammes; at the end of one hour and five minutes with a mixture of forty grammes; at the end of thirty-eight minutes with a mixture of fifty grammes. Death always took place by arrest of the respiration, the heart continuing to beat for a few seconds. The respiration does not stop suddenly, but slowly. In fine

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during the experiments the beats of the heart presented no modification whatever.

Professor Robin commences on April 8th his scientific excursion to the fish-ponds established at Concarneau, in Brittany, where he will give a course of instruction in pisciculture. Two ships will be placed at his disposal.

Dr. Siredey, physician to Lariboisière Hospital, has been elected member of the Academy of Medicine in the section of Medical Pathology.

Paris, March 18th.

MEDICAL NOTES IN PARLIAMENT.

The Medical Act Amendment Bill.

IN the House of Lords on Monday and Tuesday, the Earl of Milltown presented petitions from the King and Queen's College of Physicians in Ireland and from the Governor and Council of the Apothecaries' Hall of Ireland in favour of certain amendments to this Bill.

On Thursday, on the motion to go into committee on this Bill,

Lord Balfour of Burleigh said he had not put any amendments on the paper, because the points that he raised were decided by the House last year. But he must warn the Government that the Universities of Scotland did not look with more favour on the provisions of this Bill than they did on those of the Bill of last year. The provisions which they chiefly objected to were those which, as they believed, would lower the general standard of medical education in Scotland. If the Bill passed as it stood, the Universities of Scotland believed that candidates for their degrees would have to undergo a double examination. The first examination was a very long and expensive affair, and if the possession of a degree in medicine of one of the Scotch Universities was not sufficient to qualify a man for registration, but that those who intended to practise medicine must undergo the qualifying examination provided for in this Bill, it was absurd to suppose that the minimum examination for registration established under this Bill should be in any way equivalent to the examination for the University degree. The state of matters was, therefore, that a man who had taken a University degree would be debarred from practising unless he also underwent the qualifying examination which would admit him to the Register. The Universities of Scotland feared that the expense and trouble of a double examination would deter many from taking the University degree after the passing of this Bill who now take it; and that, instead of making the general standard of practitioners higher in Scotland, it would have the tendency to disparage the standard of attainment required for them. An examination in medicine and surgery often extended over five or six weeks, and it was quite impossible that time could be given for a young man to undergo the examination twice. At the present time, owing to the large number of candidates for University degrees in Edinburgh, the resources of the infirmary were taxed to the utmost in this respect, and if a second examination were imposed it would be found to be as unworkable in practice as he believed it to be inexpedient in theory. There was one other point, and it was almost the only point altered from the Bill of last year, and that was as to the constitution of the Medical Board of Scotland. Last year's Bill entitled the Universities to send eight members to the Board, and the Medical Corporations were to send three; this year the representation of the latter had been increased to five. He did not think there would be any serious objection on the part of the Universities to that change. But speaking, not on the part of the Universities, but as representing outside opinion, he was doubtful whether the method in which it was proposed to allocate those representatives among the corporations would meet with general satisfaction; he thought it would be found that such was not the case. But that was a matter more or less of detail. He did not mean to take any steps to give effect to the views he had expressed for the reasons he had stated; but it must not be understood because he moved no amendments that the Universities had departed from the arguments they had always advanced.

The Duke of Richmond expressed his satisfaction with the additional number of representatives given on the Board to the Medical Corporations. But it was felt at Glasgow that by the arrangement proposed in the Bill an undue power would be given to the interests of Edinburgh, which would then preponderate upon the Medical Board. This was also the feeling of the members of the medical profession in other parts of the country. He was not prepared to offer any suggestion, but he had undertaken to call the attention of the Lord President to this point in the hope that he might see his way to obviate the inequalities complained of. One thing which he (the Duke of Richmond) would urge strongly was that the Government should press this Bill through this session. It was a very important measure, and it was not fair to those engaged in medical education that a subject of so much importance to them should not be dealt with and concluded.

Lord Carlingford said he was most anxious to do full justice to the Scotch Medical Corporations; but he thought, on further consideration, that they had not been satisfactorily dealt with last year, and therefore he had now proposed to give them additional representatives, but without upsetting the balance between the Universities and the Corporations, as he felt that the former had a claim to possess a majority on the Joint Board. There had been a general acceptance of that proposal; but we had to deal with the jealousies of the several Universities and Medical Corporations among one another, and also with the jealousies of the whole body of the Universities as against the whole body of the Corporations. Now came the jealousy between Edinburgh and the provincial centres, which affected the proposal he had made. He was not wedded to his proposal, and was quite ready to consider any more satisfactory means of attaining the object they had in view; but it was not very easy to devise a plan. The Faculty of Physicians and Surgeons of Glasgow was not a first-class medical body, and the Government thought it was a reasonable course to combine it with the College of Surgeons of Edinburgh for the purpose of returning a single member to the Medical Board. He would be deeply disappointed if the Bill was not passed into law this session. But he was sorry to hear from the noble lord (Balfour) that preparations were being made for some amount of opposition to the Bill on the part of the Scotch members of the other House; he could not think that the Scotch members had fair ground for opposing it. They asked that the Scotch Universities should be placed on a footing of exclusive and exceptional favour, and that their examinations alone should be accepted as qualifying for the Register. They could not expect to be put in that exclusive and privileged position.

The House then went into committee on the Bill.

An amendment was made to Clause 9, on the motion of Lord Carlingford, providing that one of the Irish representatives on the Board should be elected by the University of Dublin and by the Royal University of Ireland, voting collectively.

The Earl of Limerick expressed the hope that an opportunity would be given on the report for the noble Earl, the Chancellor of the Irish University, to express his opinion on this point.

Lord Carlingford said several eminent members of the University had expressed to him their satisfaction with this amendment.

On the motion of Lord Carlingford, amendments were made in Clauses 18 and 19, with the object, as he said, of providing that the respective bodies should not be bound to a literal uniformity in the curricula and examinations, while, at the same time, a substantial equality in the standard of the examinations should be secured.

Some verbal amendments having been made, the Bill passed through committee, and was reported as amended to the House.

Overwork in Schools.

In the House of Commons on Friday, March 14th, Mr. Mundella stated to Viscount Lewisham that he had sent an inspector to Wolverhampton to inquire into the death of a child named Hayward, which was reported to have been due to overwork in school. It appeared that there was no inquest, and no evidence was taken as to the cause of death. The doctor who was called in expressed his opinion that the child died from brain fever, the exciting cause being schoolwork. The inspector, however, doubted both these conclusions, and asked for a post-mortem examination, which could not be obtained as the child was buried. The inspector reported that the child complained chiefly of sore-throat, and that he had no home lessons. In his (Mr. Mundella's)

opinion it seemed impossible that the child had been overpressed.

Poland-street Workhouse.

On Friday, the 14th inst., in reply to Mr. Biggar, Mr. G. Russell stated that he thought the medical officer of this workhouse ought to have ordered special diet for an inmate named Gorman, but as he did not do so the ordinary diet was supplied.

Cremation.

On Monday, in reply to Dr. Cameron, the Home Secretary said he should not like to express an opinion as to the legality of cremation, or as to whether he had any power to prevent it; but if he had any power he should use it for the discouragement of the practice.

Vaccination Prosecutions.

Mr. G. Russell, in answering a question by Mr. Hopwood, gave it to be understood that although the Local Government Board were opposed to repeated prosecutions for one case of non-vaccination, they had no objection to successive prosecutions for the non-vaccination of different children.

The Army Medical Department.

Lord Hartington, in introducing the Army Estimates, stated that it was proposed to add 200 men to the Army Hospital Corps, and to take steps to end the present anomalous relation between the Medical Department and that corps. The regulations of the medical service would be so altered as to require officers to prove by examination their fitness for promotion.

On Tuesday, Dr. Cameron gave notice that on Monday next he will move for a return of particulars as to soldiers and recruits invalided from the Army, with special reference to pulmonary and cardiac affections.

The Indian Medical Service.

Mr. Cross stated to Mr. Leamy that the officers of the Indian Medical Service were subject to the same transport and travelling regulations as the rest of the Army, and it was not proposed to suggest to the Government of India any alteration of these regulations.

On Wednesday, Mr. Gibson gave notice to ask for the production and circulation amongst hon. members of the amended memorandum relative to the Indian Medical Service.

The Southwark and Vauxhall Water Company.

Sir Trevor Lawrence gave notice to ask the President of the Local Government Board why the reservoir and filter beds of the Southwark and Vauxhall Water Company at Nine Elms, which are within sixty-four yards and seventeen yards respectively of a large dustyard, have not been covered in, as suggested to the Local Government Board by the Wandsworth District Board of Works; and why the Southwark and Vauxhall Water Company have not been required to construct subsiding reservoirs at Hampton, as recommended to the Local Government Board by Colonel Bolton more than seven years ago, and as frequently urged on the Board by the Wandsworth District Board of Works.

Weldon v. *Winslow.*

Mr. Corbet gave notice of a question referring to this case, and inquiring whether the Government propose to make any change in the law under which asylums are kept for private gain.

Medical Vote of the Army Estimates.

On Thursday, Mr. Dawnay asked the Secretary of State for War whether he would undertake that an adequate opportunity should be given to the committee during the present session for the discussion of the medical vote of the army estimates. Lord Hartington said he would make the best arrangements he could for bringing on the important vote at a convenient time. Mr. Dawnay gave notice that he will call attention to the report of Lord Morley's Committee, and will move a resolution declaring that efficiency and economy would be better secured by a return to a modified form of the regimental system.

BEQUESTS.—Mr. James White, late of Overtown, Glasgow, has bequeathed £5000 each to the Glasgow Royal Infirmary and the Glasgow Western Infirmary. Mr. Joseph Pool, late of Leicester, has left between £10,000 and £15,000 to the Leicester Infirmary.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on March 13th:—

Charlesworth, George Henry, Tonsley-hill.
Clark, Simon Prince, Cumberland-square, Glasgow.
Dodd, Walter Harry, Petherton-road, Canonbury.
Gould, Ernest Edward, Clifton-hill, Exeter.
Hugill, George Frederick, Rosedale, Chiselhurst.
Jenkins, John, Royal Infirmary, Bristol.
Menzies, James Herbert, Gwendwr-road.
Robbs, Charles Edward, Powis-square.

LA SOCIETA MEDICO-FISICA of Florence has recently awarded the first triennial Galligo prize to Drs. A. Bianchi and C. Balocchi for their essay on "Regressive Spinal Paralysis of Infancy."

THE Superior Court having confirmed the conviction of several *employés* of the Commissioners of Sewers, charged at the instance of the Metropolitan Board of Works with sweeping mud down the gratings of the street sewers, that body has now given orders that such method of disposal of mud shall be discontinued.

AT the recent annual meeting of the subscribers to the Denbighshire and Flintshire Infirmary it was decided that the institution should be registered under the Joint Stock Companies Act, a procedure that was alluded to in a letter by Dr. J. Lloyd Roberts, published in our columns on Nov. 3rd, 1883.

CITY OF LONDON DISPENSARY. — The annual general meeting of the subscribers to and supporters of this institution was held on the 13th inst. The committee of management, in their report, stated that the results of the past year had in all respects been satisfactory. The subscriptions and donations amounted to £144 13*s.* 6*d.*, and the receipts from subscribing members to £383 14*s.* 6*d.*, the latter being in excess of 1882 by £79 11*s.* 6*d.* The total number of patients relieved during the past year reached over 16,000, showing, as compared with 1882, an increase of nearly 3500.

NORTH-EASTERN HOSPITAL FOR CHILDREN. — A special general meeting of the subscribers to this hospital was held on the 14th inst. The report stated that the number of patients treated during the year was 637 in-patients and 14,548 out-patients, as compared with 489 in-patients and 13,633 out patients in 1882. The income of the year from subscriptions and donations had fallen short of that received in 1882 by about £140, and the expenditure exceeded the income by £977. In response, however, to a special appeal, the receipts during the past quarter have been larger, and have exceeded the income by £634.

ABERDEEN UNIVERSITY CLUB, LONDON. — A special general meeting of the Aberdeen University Club (the formation of which we noticed in these columns a few weeks ago) was held at the Inns of Court Hotel, Holborn, on Wednesday, March 12th. On the motion of Dr. Mitchell Bruce, Surgeon-General Sir Wm. Guyer Hunter was called to the chair. The rules of the Club, as revised by the Provisional Council, were, after some discussion, unanimously adopted. It was announced that the first dinner will be held on May 21st, and that His Grace the Duke of Richmond and Gordon had consented to preside on that occasion. The honorary secretaries are Dr. R. W. Burnet and Mr. R. M. Routledge.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—From the report read at the annual meeting of the governors of this institution on the 11th inst., it appears that the number of in-patients treated during the year was 1731, of whom 1061, as urgent cases, were admitted without tickets, as against 1238 the preceding year. The number of out-patients during the past year was 10,577, of whom 3391, as accidents or urgent cases, were treated without tickets. The cost per head of each in-patient was £3 14*s.* 8*d.*; the cost per bed occupied was £55 4*s.* 4*d.*; and the stay in the hospital averaged twenty six days. The cost for each out-patient was 2*s.* The total number of in-patients sent to neighbouring inland and marine convalescent institutions was 25. The receipts have fallen short of the expenditure by £625.

A MEETING of the St. Bartholomew's Hospital Ambulance Company was held in the Great Hall of that hospital on Thursday last, under the presidency of Sir Sydney Waterlow, Bart., M.P. The movement has received the support of nearly all the members of the staff of the hospital, and has been enthusiastically taken up by the students. The St. Bartholomew's Company numbers over a hundred members, who are now actively engaged in ambulance drill.

METROPOLITAN ASYLUMS BOARD. — At the fortnightly meeting of this Board on the 15th inst., the returns of the number of small-pox and fever patients who had been admitted into the hospitals of the managers were presented. The figures relating to fever patients, as compared with those of the previous fortnight, showed an increase in the total number of patients remaining under treatment of seven; the small-pox returns showed an increase in the total number of patients remaining under treatment, as compared with the same period, of fourteen.

BRITISH HOME FOR INCURABLES.—The Festival Dinner of this institution took place on the 18th inst. In proposing the toast of the evening, the Lord Mayor stated that the institution had two objects—first, the Home at Clapham; and, secondly, providing those who were unable to gain admission into it with a pension of £20 per annum. The required income was £12,000, while the sum annually subscribed was £3500. The secretary read a list of subscriptions amounting to £1839, making the total sum collected since December 7th £3100.

ASYLUM FIRE ESCAPES.—On Monday and Tuesday trials were made with two improved telescopic fire escapes sent to the Hants County Asylum by Messrs. Merryweather and Sons, of Long-acre, London. The escapes will reach third-storey windows, and an ingenious chute has been adapted to accompany the sliding ladders, so as to be available for rescuing persons from either second or third floor windows with equal ease, and helpless patients can be rapidly put in at the top and allowed to slide down to the ground without assistance or danger of injury. The escapes can be raised, lowered, or wheeled about by one man, and a close box is fixed to contain and preserve the canvas chute when not in use. In two minutes an escape was wheeled 120 yards, and placed in position at an upper window ready for service.

ASSOCIATION FOR PROMOTING TRAINED NURSING IN WORKHOUSE INFIRMARIES.—A meeting in furtherance of the objects of this Association was held on the 17th inst. at the residence of the Marquis of Salisbury. The Association originated in 1879, in order to supply Boards of Guardians with competent and duly trained nurses; and since that time nearly twenty unions and infirmaries in the metropolis, besides several in the country, have availed themselves of the services of those who have been so trained. Many applications, however, have had to be refused, owing to the lack of suitable women. During the past year twenty-four have been appointed, and additional funds are required in order to extend the operations of the Association. The chair was taken by Mr. Bousfield.

UNIVERSITY OF CAMBRIDGE. — In May next a Professor of Pathology will be elected, with a stipend of £800 a year. Soon afterwards four Medical and Surgical Lecturers will be appointed, with stipends of £50; one of them to take the subject of midwifery. The electors to the Professorship are the Vice-Chancellor, Sir James Paget, Dr. J. F. Payne, Dr. Burdon Sanderson, Dr. Paget, Dr. Humphry, Dr. Latham, Dr. Gaskell, and Dr. M. Foster. The lecturers will be appointed by the General Board of Studies.—The Thurston Prize will be awarded at the end of the present academical year. The prize, about £54 (as money, or in any other form that may be thought best), is given triennially "to that member of the college who has published in the course of the preceding three years the best original investigation in Physiology (including Physiological Chemistry), Pathology, or Practical Medicine." Publications or notice of publications may be sent to the master.

THE HOSPITALS ASSOCIATION.—It is now arranged that the evening meetings of this Association shall be held at the rooms of the Medical Society of London, Chandos-street, Cavendish-square. The first will take place on Wednesday next, when Mr. William J. Nixon, house governor of the London Hospital, will read a paper on "Difficulties associated with the Administration of the Out-patient Department, and how best to deal with them." Sir Andrew Clark, Bart., will preside. Papers on the following subjects will be contributed during the present session: April 23rd, "How far our Hospitals should be Training Schools for Nurses." May 21st, "How the Hospital Sunday and Saturday Funds can be made more Useful to the Hospitals." June 18th, "Is it desirable that Hospitals should be made Self-supporting, and, if so, to what extent?" Applications for membership should be addressed to the Secretary, Mr. J. L. Clifford Smith, at the office, 1, Adam-st., Adelphi, W.C.

THE UPPER THAMES AS A SOURCE OF WATER-SUPPLY.—At a meeting of the Society of Arts on the 13th inst., a paper on this subject was read by Dr. Frankland. The author agreed that the present water-supply of the metropolis was an unsatisfactory one, in spite of extensive improvements on the banks of the river and in the appliances of the water companies. It was impossible, he said, to protect so large a river as the Thames, flowing through a populous district in a high state of cultivation, from contamination with sewage and objectionable matters. He considered that the great obstacle in the way of a supply for the metropolis from spring or deep well water, which was especially abundant in the valley of the Thames, was the great magnitude of the capital invested in existing works, the interests of which capital were at present allowed to override all other considerations. A short discussion ensued, but ultimately, on the suggestion of Sir Frederick Abel, further debate was postponed.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

APPLETON, THOMAS A., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Second District of the Fulham Union.

ASHMEAD, GEORGE, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the Brierley-hill and Brettell-lane Subdivisions of the Staffordshire Constabulary, vice H. Walker, M.D., J.P., deceased.

BARR, THOMAS, M.D., F.F.P.S.Glas., has been appointed Aural Surgeon and Lecturer on Aural Surgery to the Glasgow Hospital and Dispensary for the Diseases of the Ear, vice Dr. James Patterson Cassells, resigned.

COXWELL, C. F., M.R.C.P.Lond., has been appointed Assistant-Physician to the Royal Hospital for Diseases of the Chest, City-road, vice Gabbett, resigned.

DAVIDSON, P., M.A., M.B.Edin., has been appointed Assistant Medical Officer to the Infirmary for Children, Liverpool, vice McClelland, promoted.

DAY, J. ROBERSON, M.R.C.S., L.R.C.P.Lond., &c., late Obstetric Assistant at University College Hospital, has been appointed Clinical Assistant to the Brompton Hospital for Consumption.

ELLIS, RICHARD, F.R.C.S.Ed., of Newcastle-on-Tyne, has been appointed Honorary Consulting Surgeon to the Sheffield and South Yorkshire Ear and Throat Hospital.

ERSKINE, JAMES, M.A., M.B., C.M., has been appointed Assistant-Surgeon to the Glasgow Hospital and Dispensary for the Diseases of the Ear.

GARMAN, WALTER, M.B., C.M.Edin., has been appointed Resident Physician to the Queen's Hospital, Birmingham, vice Dr. Sanders, resigned.

GOULD, A. PEARCE, F.R.C.S., B.Sc.Lond., has been appointed Surgeon to the Royal Hospital for Diseases of the Chest, City-road, vice Walsham, resigned.

HARRIS, SPENCER CLABON, M.R.C.S., L.S.A.Lond., has been appointed Deputy Surgeon to the Militia. Also Surgeon to the Dispensary of the City of Ely, vice Sinclair, deceased.

MACPHERSON, ROBERT, M.B., C.M., has been appointed Physician on the Staff of Anderson's College Dispensary, Glasgow.

REDMOND, WALKER, L.S.A.Lond., has been appointed Surgeon to the Tambo Hospital, Queensland.

RYLEY, J. BERESFORD, M.D., M.R.C.S., has been appointed Consulting Physician to the Hearts of Oak Benefit Society.

SCOTT, JOHN WALTER, late Surgeon R.N., has been appointed Junior Assistant Medical Officer to the Hants County Asylum, Knowle, Fareham.

SMITH, F. MARTIN GODDE, M.R.C.S., has been appointed Medical Officer for the Droxford District and the Workhouse, Droxford Union.

SMITH, WM. BEATTIE, F.R.C.S.Ed., L.R.C.P.Ed., has been appointed Acting Medical Superintendent to the Sunbury Lunatic Asylum, Victoria.

SUNDERLAND, SEPTIMUS, M.D., L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Royal Hospital for Children and Women, Waterloo-bridge-road, S.E., vice J. F. Briscoe, M.R.C.S., resigned.

VINCENT, HENRY B., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Workhouse of the Mitford and Launditch Union.

WILSON, ALEXANDER, M.R.C.S., L.R.C.P., has been appointed Junior Resident Medical Officer to the General Hospital for Sick Children, Pendlebury, Manchester.

WINDLE, BERTRAM C. A., M.A., M.D., B.Ch.Dub., has been appointed Resident Medical Officer to the General Hospital, Birmingham, vice J. W. Bond, M.D., resigned.

Births, Marriages, and Deaths.

BIRTHS.

BLATHERWICK.—On the 12th inst., at Dunalvon, Dumbartonshire, the wife of Charles Blatherwick, M.D., of a daughter.

COLLIER.—On the 17th inst., at Bohemia House, Gorleston, Great Yarmouth, the wife of Herbert Collier, M.D., F.R.G.S.Lond., of a daughter.

COOMBS.—On the 12th inst., at Redburn, Bedford, the wife of Rowland H. Coombs, L.R.C.P., of a daughter.

HOLDSWORTH.—On the 12th inst., at Thames Ditton, Surrey, the wife of W. Holdsworth, Surgeon, of a daughter.

REYNOLDS.—On the 6th inst., at Highcroft, Shepherd's-hill, Highgate, the wife of Edward R. B. Reynolds, M.R.C.S., of a daughter.

MARRIAGES.

BOND—PRIESTLEY.—On the 8th inst., at St. Paul's Church, Clifton, J. W. Bond, M.D., of New-cross, to Ella, daughter of the late Colonel Edward Ramsden Priestley, of the 42nd Royal Highlanders (the Black Watch.)

CRABB—SMITH.—On the 13th inst., at Pittengardner, Ferdoun, N.B., James Crabb, M.D., to Isabella, third daughter of James Smith, Esq.

DEATHS.

ALLEN.—On the 10th inst., at 40, Dorset-street, Portman-square, of bronchitis, Dinah, widow of the late A. B. de Lisle Allen, Esq., M.R.C.S.Eng., L.R.C.P.Ed., in her 69th year, deeply regretted.

ARCHER.—On the 27th inst., Surgeon-General Charles Archer, M.D., late of the Bengal Medical Department, and Deputy Inspector-General of Hospitals, aged 66.

AYERST.—On the 15th inst., at Stanbury, Torquay, James Smith Ayerst, M.D., son of the late Francis Ayerst, Esq., of Gillingham, Kent, aged 59.

BALDING.—On the 13th inst., at Barkway, Herts, Margaret, eldest surviving daughter of the late James Balding, M.R.C.S., L.S.A.Lond.

CORBOULD.—On the 12th inst., at Somers-road, Reigate, Francis John Corbould, M.D., aged 65.

FURLONG.—On the 16th inst., at Dolbaidd, Carmarthenshire, after a short illness, Surgeon-General Furlong, Retired Pay, aged 61.

HOGG.—On the 3rd inst., at Cleobury Mortimer, Salop, Henry Lee Hogg, M.R.C.S., L.S.A.Lond., eldest son of the late Stephen Allen Hogg, Esq., of Bath and Weston-super-Mare, and formerly of King's Lynn, Norfolk, aged 70.

HOOD.—On the 10th inst., very suddenly, at the Château de l'Espagnerie, Wimille, Pas de Calais, France, Thomas Hood, M.R.C.S., L.R.C.P.Ed., L.S.A.Lond.

LEREW.—On the 16th inst., at Clifton-terrace, Maida-vale, W., William Kirby Lerew, M.R.C.S., L.S.A.Lond., aged 69.

REYNOLDS—On the 18th inst., at Beckenham, suddenly, Samuel Reynolds, F.R.C.S., formerly of Stoke Newington, in his 88th year.

ROBINSON.—On the 16th inst., at Devonshire-street, Portland-place, W., John Robinson, M.R.C.S., aged 72.

STACPOOLE.—On the 2nd December, 1883, at Cromwell, New Zealand, Joanna, the wife of C. A. Stacpoole, Surgeon, aged 26.

STEWART.—On the 9th inst., at Highfield House, Barnsley, Laura Maria Hamilton Stewart, wife of W. Stewart, F.R.C.P.

TOULMIN.—On the 13th inst., at his residence, Upper Clapton, Francis Toulmin, F.R.C.S., in his 82nd year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

UNIVERSITY OF LONDON.

INTERMEDIATE EXAMINATION IN SCIENCE AND PRELIMINARY SCIENTIFIC (M.B.) EXAMINATION.

The following is the new Syllabus referred to in our leader on page 534:—

General Biology.

The elements of vertebrate morphology and physiology, as exemplified by the rabbit, the fowl, and the frog. The description of the external form and the nomenclature of the parts of these animals. The leading resemblances and differences in the plans of structure of the three. The chief features in their osteology, with especial reference to the skull and limbs and the visceral anatomy of each, including the general structure of the brain, the spinal cord, and the sense-organs. The histological character of blood, epidermal and epithelial organs, connective tissues, cartilage, bone, muscle, and nerve, in these animals. The characters and mode of formation of their ova and spermatozoa. The chief stages of the development of the frog, fowl, and rabbit. The nature of the placenta in the latter. The structure and life history of astacus, lumbricus, helix, distoma, hydra, vorticella, and amœba. The elementary morphology and physiology of the flowering plant. The description of its external form. The leading modifications in the structural plan of the flower. The leading types of fruits; the modifications by which floral organs take part in their structure. The histological characters of the growing point both in stem and root; the mode of origin and leading characters of epidermal, fibro-vascular and ground tissues. The development of foliar organs and of the branches of stem and root. The mode of origin, structure, and ultimate development of ovules and of pollen-grains. The mode of development of the embryo and of the endosperm. The distinctive facts in the life history of pinus. The structure and life history of a fern, a moss, chara, fucus, penicillium, pirogyra, mucor, protococcus, saccharomyces, bacterium.

Practical Examination in Biology.—Each candidate must be prepared to examine microscopically, to dissect, and to describe specimens of the animals and plants referred to in the preceding syllabus.

Medical Diary for the ensuing Week.

Monday, March 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Cavafy, "On Erysipelas, with Low Temperature."—Dr. D. W. Finlay, "On a Case of Opium Poisoning."—Dr. A. T. Waters, "Meteorological Observations at Davos."—Dr. D. W. Callimore will show a Case of Post-diphtheritic Paralysis at 8 P.M.

Tuesday, March 25.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Gamgee, "On Animal Heat."

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Right Hon. the Earl of Wharncliffe, "Exhibition of a Flint Implement from the North Riding of Yorkshire."—Mr. F. G. Hilton Price, "Note on some Ancient Egyptian Bronze Implements."—Dr. J. G. Garson, "The Frankfurt Craniometrical Code."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. E. Noble Smith, "On Seventy Cases of Dupuytren's Contraction of the Fingers."—Dr. H. Radcliffe Crocker, "On Three Cases of Xeroderma Pigmentosum (Kaposi)." The patients will be exhibited a second time, the morbid growths having been removed.

Wednesday, March 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lecture: Dr. Hughlings Jackson, "Evolution and Dissolution of the Nervous System."

HUNTERIAN SOCIETY.—8 P.M. Mr. Hutchinson, "Some Notes on Arsenic."—Mr. M'Carthy will show some Osteotomies.—Dr. Stowers will relate the Sequel of a Case of Paget's Disease of the Nipple.—Mr. Charters J. Symonds will show a Case of Scleroderma, with Gangrene of Fingers.

Thursday, March 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On the Older Electricity."

Friday, March 28.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lecture: Dr. James Andrew, "Etiology of Phthisis."

ROYAL INSTITUTION.—3 P.M. Professor Osborne Reynolds, "Motion of Water."

CLINICAL SOCIETY OF LONDON.—Dr. Finlay, "On Cases of Enteric Fever associated with Rheumatism."—Mr. Davies-Colley, "On a Case of Dislocation of the Spine."—Mr. Durham, "On a Case of Neuralgia successfully treated by Trephining."—Dr. de Havilland Hall, "Sequel to a Case of Perichondritis of the Larynx."

Saturday, March 29.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Captain Abney, "On Photographic Action."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 20th, 1884.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 14	31·17	S.	50	47	..	61	47	..	Cloudy
„ 15	30·12	S.W.	53	50	..	68	49	..	Foggy
„ 16	30·01	S.E.	58	52	..	69	48	..	Hazy
„ 17	30·04	S.E.	52	49	..	69	45	..	Hazy
„ 18	30·09	S.W.	53	51	91	67	49	..	Hazy
„ 19	30·14	S.W.	48	46	87	60	45	..	Overcast
„ 20	29·95	W.	47	43	91	54	43	·01	Bright

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE WOUNDED IN EGYPT.

A CORRESPONDENT has written to us recommending the immediate removal of the wounded men from Saez into mountain air, and suggesting Mount Carmel or Mount Lebanon as being within accessible distances to which they might be carried in litters. We are afraid our correspondent has but a faint idea of the difficulty of organising an adequate hospital and the requisite means of transport under such circumstances, or the injurious influence such removal would exercise without a suitable place being ready to receive the men. We have no doubt the medical officers in Egypt are fully alive to the importance of removing the sick and wounded as soon as it can be done with safety, and that they will be sent either to Cyprus or England when they are in a fit condition to undergo the unavoidable fatigue attending such an arrangement.

M.R.C.S.—We see no good in debating the question. It may be or may seem an anomaly for a College of Physicians to give a surgical licence, but that such is the law admits of no doubt, and our correspondent would scarcely go so far as to say that a man licensed in surgery was not to be called a surgeon. Let us hope that we shall soon see the end of half diplomas, and with it the end of half titles.

J. W. H. is referred to a general notice at the head of this column.

"SNAKE POISON."

To the Editor of THE LANCET.

SIR,—I must confess that the reply to my letter, contained in your issue of the 12th January last, has taken me much by surprise. I asked the Anti-Vivisection Society to point out to me any other efficient and more humane means of testing the efficacy of reputed antidotes to snake-poisons than by experiments on the lower animal. In reply, the hon. secretary tells us—first, that "we," whoever that may mean, are of opinion there is no reasonable hope that any antidote will ever be discovered; secondly, that as it is for man's benefit that the antidote is sought, the experiments should be made on man, and not on the lower animals. The postscript does not touch the subject. I have no intention to discuss with Mr. Jesse the subject of the physiological action of the various snake venoms, but I may say that as I have a "reasonable hope" that an antidote will some day be found, I am sufficiently justified on that ground in experimenting on the lower animals. But even did I believe only in the mere possibility of the discovery of an antidote, I should be quite justified in experimenting with a view to its discovery unless the impossibility had been demonstrated. Surely the hope is not so very unreasonable in view of the constantly recurring lesson we have of the practical value of measures and appliances which were thought to be utterly beyond the bounds of possibility only a few years since. As for the rapid action of snake venom, we have numerous drugs which act with far greater rapidity through the stomach and otherwise than does snake venom under ordinary conditions. The difficulty lies in discovering one which can counteract the lethal effects of the venom, but Mr. Jesse is a bold man if he denies the possibility of such a discovery ever being made. His belief either one way or the other can bind only himself. Whether it follows that an antidote to cobra venom would counteract the poison of other snakes is quite beside the question. The discovery of an antidote to the venom of the cobra only would sufficiently justify any number of experiments on the lower animals.

Now, as to the statements that a wide field exists for experiment on man, and that they are less fallacious than experiments upon animals. The writer of the letter under consideration asks somewhat triumphantly "What need is there for experiments on animals when there exists such a splendid field and ample opportunity for observation and experiment upon man himself by the many able physicians and surgeons throughout India, &c.?" The reply is very simple: there is no such field. It ought not to surprise Mr. Jesse to hear, if he has been resident in India for even a short time, that though such a large number of deaths occur annually, probably not ten of the cases come under the observation of the physicians and surgeons to whom he alludes. There are numbers of surgeons serving in India who have never seen an authentic case of snake poisoning in man, and probably not two who have seen five cases in the course of twenty years' service. Even when the natives have an opportunity of calling in a medical man, they will do so only in very exceptional cases—often when life is extinct. I have on three or four occasions been called to treat persons who have been dead for some hours. The "splendid field" for experiment is in the hands of the native Hakims, Malbodhaus, and Rojas. As for observations on the human subject being more free from fallacies than experiments on the lower animals, such a statement is opposed to all experience. Even if a wide field for experiment existed, I for one should decline to act upon the suggestion of the "Hon. Sec. to the Society for the Abolition of Vivisection" (surely they should add "on the lower animals"). I consider it infinitely more unjust and cruel to inflict pain upon human beings for experimental purposes than upon pariah dogs. Every individual who places himself in the hands of a medical man does so confidently in the hope that every effort will be directed exclusively to curing him, and not to the possible discovery of something that will benefit someone else. And I believe there are very few indeed in our profession who would abuse that confidence. There is also another side of the question. What view would the public and the law take of this suggested "experiment on man?" Mr. Jesse scarcely strengthens his position by an utterly irrelevant and inaccurate quotation from the "Essay on Man."

I am, Sir, yours faithfully,

Goalundo, Feb. 7th, 1884. VINCENT RICHARDS.

To the Editor of THE LANCET.

SIR,—Your correspondent, "Incognito," will notice the editorial acknowledgment of my communication in THE LANCET of Feb. 23rd, which contained his first letter. The date appended to my note is an error; it should read Feb. 19th. So far as I know, nothing has yet been done in the line of research about which he inquires. I venture to think it would be one well worth investigation.

According to Milne-Edwards, the poison of many serpents, including the cobra, is harmless when swallowed. If this be true, there is a probability that the salivary or gastric ferments are antidotal to the poison unless this be destroyed by digestion, hence the effect of the subcutaneous introduction of freshly prepared aqueous extracts containing these ferments and that of the pancreas might be worth experiment, as also that of inoculation with a mixture of the poison, and the ferments after these had reacted together in test-tubes under suitable conditions for varying periods.

I say that there is this probability, because it seems that some poisons either do, or appear to, produce their physiological effects and to be eliminated without undergoing destruction, an example of which may be found in the painful case where Dr. Stevenson discovered and isolated aconitine from the urine found in the bladder at the post-mortem of a young man whose death was due to poisoning by that alkaloid. Of course the explanation may be that it is merely a question of the quantity of the active principle absorbed, some being destroyed, some eliminated; and everyday experience shows that hypodermic injections are more rapid and sure in much smaller doses than administrations by the mouth.

The same authority states that viper poison is innocuous to the civet, meaning, I presume, the *viverra civetta*. Possibly the special secretion of this peculiar carnivor may contain the antidote.

I am, Sir, your obedient servant,

Castlebury-road, Fulham, March 10th, 1884. C. H. PIESSE, F.I.C.

O Mores.—We do not think anything would be gained by noticing the matter.

Mr. Feltoe.—The book is in the hands of the reviewer.

"DETERMINATION OF SEX."

To the Editor of THE LANCET.

SIR,—Your correspondents of Jan. 5th and Feb. 9th upon the above subject may like to hear of a case I am able to report. A lady, now the wife of a friend of mine, had before her marriage an ovarian tumour removed by Mr. Spencer Wells, she visiting England for the purpose of being under the care of that gentleman. She has since been delivered of four children. The first child was a girl; next came twins, a boy and a girl; the fourth child was a girl.—I am, Sir, yours truly,

Boston, U.S.A., Jan. 10th, 1884. H. K. OLIVER, M.D.

BEST COPY

THE ESTIMATION OF SULPHUR COMPOUNDS IN COAL GAS.

IN our numbers of Feb. 2nd and Feb. 9th, we directed attention to the lime process of purification of gas. In the *Journal of Gas Lighting* of the 18th inst. appears a short article, by Professor J. Alfred Wanklyn, on the sulphur compounds in coal gas, which is worthy of reproduction.

"It has been pointed out by more than one chemist that the referees method of determining the amount of sulphur existing in coal gas is very far from being perfect. The sulphurous acid, which is formed by the combustion of the sulphur compounds, is not placed by the referees under conditions which ensure that none of it shall escape oxidation; and it is only too true that one and the same sample of gas will furnish different results in the hands of different operators. An improvement of the referees' method is urgently called for. The following modification has been practised in my laboratory, and appears to meet the requirements of the case. Employing the apparatus which is now so well known as that recommended by the referees, I abandon the use of the carbonate of ammonia and of ammonia in all shapes, and I place iodine amongst the glass balls in the upright cylinder. I employ about five grammes (or seventy-five grains) of iodine for each determination of the sulphur in five cubic feet of gas. The reaction which takes place is very well known —viz.: $SO_2+H_2O+I_2=SO_3+2$ HI.

As an extra precaution against loss of sulphuric acid, I insert a long strip of filter-paper into the long slanting tube, and from time to time pour in small quantities of distilled water, so as to keep the filter-paper moist. I find that the gas may be burnt at least twice as fast as the referees recommend. The gas in my own laboratory at Westminster has furnished 18·6 grains of sulphur per 100 cubic feet. I have to caution gas managers against using both ammonia and iodine at the same time, and so producing the terrible iodide of nitrogen."

INFANTILE SCURVY.

To the Editor of THE LANCET.

SIR,—The following case, which has lately come under my care, affords another example of the evil effects of an exclusive use of the prepared tinned foods in the feeding of infants, as pointed out by Dr. Cheadle, Mr. Edmund Owen, and others in the pages of THE LANCET.

A. H——, aged one year, was brought to me on Feb. 15th, 1884, by his mother, who says that he was a fairly healthy child up to the age of seven months, when he cut his first teeth. Since then she has noticed that he has not used his legs at all freely, as before, when being bathed, and has latterly seemed to be in great pain when they were touched or moved. This, however, was attributed by her friends to teething, and she had not consulted any medical man in consequence. It is her first child, and was nursed by her up to the age of three months; since then he has been fed entirely on Nestle's milk food, as he seemed to prefer that to anything else. There is no suspicion of syphilis, and the father is a healthy man; but on the mother's side there is a decided history of phthisis, a brother and two sisters having died of "consumption." On examination I found the child very anæmic and altogether unhealthy in appearance, lying almost helpless in his mother's lap and crying if moved. The legs were both swollen from the upper third of the tibia downwards, more especially the left, which was drawn up and flexed on the thigh. The skin of both was tense and shiny, but with no elevation of temperature. The carpal ends of the radii were much enlarged, the ribs eaded, the anterior fontanelle considerably open; but there was not much swelling of the abdomen nor enlargement of the liver or spleen. In the skin over the sternum were several hæmorrhagic spots. The gums round the upper incisors were swollen, spongy, rounded at the edges, bleeding at the slightest touch, with capillary hæmorrhages well marked, and almost concealed the teeth, which were fully developed. The case, although less severe, is very similar to the one described by Mr. Edmund Owen in THE LANCET of Feb. 9th; and he considered my case quite typical of infantile scurvy. The child rapidly improved (in twenty-four hours the gums were decidedly better) on a diet of fresh cow's milk, the juice of raw meat, potatoes and gravy, with small quantities of cod-liver oil and the juice of an orange daily; and is now (March 3rd) practically free from all scorbutic symptoms, being quite lively and again moving his limbs freely, the swelling having quite disappeared. This is the first case of the kind that I have met with in a somewhat extended experience.

I am, Sir, your obedient servant,

GEORGE R. LAKE, M.R.C.S., &c.

Gloucester-crescent, Hyde-park, W., March, 1884.

"INTRACTABLE HEARTBURN."

To the Editor of THE LANCET.

SIR,—In your issue of last week I noticed that "A Young Practitioner" is suffering from the above very troublesome affection, and so far has failed to obtain any relief. I might suggest a remedy which I have found very efficacious in stubborn cases like this—that is, to take one or two teaspoonfuls of glycerine before, with, or after each meal, little meat being taken; the juice of one or two lemons in a tumbler of water each morning about an hour before breakfast, and one at bedtime, on an empty stomach if possible. This seems very simple, but I have, as I say, found it very efficacious, as also the remedy suggested by Dr. Bryan, F.R.C.S. Eng. Rhubarb, with magnesia and carbonate of ammonia, I have found beneficial in conjunction with the above simple treatment.—I am, Sir, yours, &c.,

March 16th, 1884. RICHARD F. OWEN, M.K Q.C.P.I.

A FRAUD IN TARTAR EMETIC.

MANY years ago the manufacture of tartar emetic was commenced on a large scale in France. The drug was sold at five francs per kilogramme. The Germans subsequently took up the manufacture, and sold the article for three francs per kilogramme, thereby destroying the French industry. But it is now announced by both German and French authorities that this cheap German tartar emetic contains over 40 per cent. of oxalic acid, and is in fact nearly as much an oxalate as a tartrate of antimony and potassium. The medicinal effects of the two drugs mentioned are very different, and it is wisely urged on pharmacists to look to their stock of tartar emetic.

ANTIMONY IN AUSTRALIA.

ANTIMONY ORES have been found in numerous parts of New South Wales; the principal lodes occur in the Macleay, Armidale, Clarence, and Cudgegong districts. The ore consists of oxide and sulphide of antimony, and occurs in irregular bunches, occasionally of a considerable size, enclosed in a quartz matrix, which forms the chief constituent of the lodes. The quantity and value of antimony exported from Sydney to the end of 1881 was 1103 tons; value, £29,176.

Mr. Gidley-Moore.—The percentage of glass powder used with the oxide of zinc, both in the "oxychloride" and "oxyphosphate" of zinc, is 2½ per cent.; but our correspondent is strongly advised to obtain his "white fillings" from one of the dental depôts.

HOUSE SANITATION.

To the Editor of THE LANCET.

SIR,—I notice an error in your report of my paper on the above subject, read at the meeting of the Medical Society of London on the 10th inst., which I shall be glad, if you will allow me, to correct. The report makes me say that I "had not found enteric fever in houses having only cesspools—i.e., not connected with the main drain." This of course is not correct. I have, on the contrary, frequently found enteric fever in such houses. What I said was that, according to my experience, such houses might be in that condition for any number of years without enteric fever appearing in them, and that it did not appear in such houses unless the poison was taken there from somewhere else; whereas in houses with defective sanitary arrangements connected with the main sewers of a town, enteric fever might and frequently did appear, the poison gaining access from the main sewer through the defective sanitary arrangements.—I am, Sir, yours obediently,

Bolton-row, Mayfair, W., March 17th, 1884. W. H. CORFIELD.

To the Editor of THE LANCET.

SIR,—Professor Corfield's paper, read at the Medical Society last Saturday, gives a long list of facts connected with house sanitation, which are continually coming under the notice of general practitioners. The difficulty is, not in recognising, but in remedying these defects, and the difficulty is a monetary one. I suppose there are few houses built up to a pretty recent date in which there is not something imperfect as regards drainage, not perhaps great enough to come under the notice of a sanitary inspector, but enough to produce a considerable amount of general sickness in a family. Sewer gas gets into the house somehow. The mischief is recognised, and the remedy pointed out, but not adopted, and for this reason: it costs from £100 to £200 or more to put the drains into anything like a proper condition, not to mention the fact that during the process householders and family must all turn out; the result is that nothing but patchwork is undertaken. I find this nearly always the case in leasehold houses, and naturally enough; the money spent adds considerably to the rent, especially if there are only two or three years to run. I have never found any difficulty in getting people who own their houses to do what is necessary. It is evident, therefore, that the only cure for this state of things is an Act of Parliament compelling landlords to refund to present tenants money spent on necessary sanitary work, or to spend the money themselves, and raise the rent to the next occupier. Of course a competent authority would have to decide what required doing, but there would be no difficulty about that. This would not be a tenant's improvement act, in the usual sense of the term, as these changes would be for health, not for profit.

I am, Sir, your obedient servant,

March 17th, 1884. JAMES LATTEY.

Mr. C. Sansom.—The paper is marked for insertion.

M. C.—We think Y should continue to attend the case.

G. H. Q. should put the question to his medical attendant.

"TREATMENT OF ERYSIPELAS BY WHITE LEAD."

To the Editor of THE LANCET.

SIR,—Several letters have recently appeared in THE LANCET respecting the utility of lead paint in erysipelas. One or two of the letters favourably mentions Wilson's linimentum plumbi lactatis co. Of the latter I can speak with confidence, as I have freely prescribed it both in hospital and private practice, and always with success. It also answers well as a dressing in many surgical cases, its efficacy depending largely, I should say, upon the albuminate and salicylate of lead present. Although freely applied over extensive surfaces, and even used as an injection, I have never seen a trace of lead-poisoning manifested.

I am, Sir, yours, &c.,

Manchester, March 15th, 1884. J. H. G. DRUMMOND.

BEST COPY AVAILABLE

A CORRECTION.

MESSRS. WATKINS, BAKER, BAYLIS, & BAKER, in reference to a statement in our issue of the 15th inst. that the personal estate of the late Dr. Charles Hilton Fagge amounts to over £11,000, inform us that that sum very greatly exceeds (in point of fact by about one-half) the amount available for investment for the benefit of Mrs. Hilton Fagge and children, nearly the whole of such available amount being derived from life policies.

Doubt.—We do not so understand the clause. The registrability of the title will depend on the estimate of it formed by the Medical Council and on the virtue of the degree in Belgium; but nothing in the Bill, we presume, will prevent the use of the title attaching to the degree.

THE communications of *Dr. G. W. Balfour*, *Dr. Russell*, *Mr. Truman*, and of other correspondents are unavoidably held over until next week.

THE CHOLERA IN EGYPT.

To the Editor of THE LANCET.

SIR,—In the account of the discussion on Sir W. Hunter's paper at the Medical Society on Monday last, I am reported to have said, "With regard to the spread of cholera by water, he would point out that two battalions stationed a short distance above Boulak, on the Nile, suffered severely, while those who were stationed below suffered slightly." This is, as far as it goes, quite true, but omits the most important factors of the case, and conveys no adequate impression of the circumstances which were narrated. It was not my intention to discuss the general question as to whether or not cholera can be conveyed from one place to another by air, water, or any other medium, methods of spreading the disease which are doubted by some observers—Sir W. Hunter, as I believe, amongst the number,—and must necessarily be denied by those who believe that a body infected with the disease is incapable, under any circumstances, of causing a disease like its own in other bodies; or, in other words, that it is "non-contagious."

The facts which were related by me were brought forward only to show that possibly within the general wave of the epidemic there were side eddies in which the disorder was spread from one district or from one body of men to another by means which (if the conclusions drawn were correct) are more or less under human control. The course of the epidemic amongst the Egyptian troops was very remarkable. In July, 1883, there were ten regiments under the command of Sir Evelyn Wood, each numbering about 500 men. Eighty-six cases of cholera occurred amongst them in July and August, and of these no less than 59 occurred in two regiments—the 6th Battalion and the Artillery—viz., 31 in the former and 28 in the latter. Such being the case, it is remarkable that of these two regiments (in each of which a greater number of cases occurred than in the whole of the rest of the army) one was quartered at Gezel, directly to the south, and therefore to leeward of Boulak, the most infected district of Cairo; and that in the other, the 6th, which was camped about four miles higher up the river, not a single case occurred until after the evicted inhabitants of Boulak had been brought to a place about four miles to windward of their camp. All the other battalions were to the north of Cairo, and therefore to windward of it; so that whatever deductions may be drawn, the fact remains that, amongst two bodies of native troops separated by only a few miles, and under similar conditions with regard to food, clothing, &c., six times as many cases occurred in those which were quartered to the south and to leeward of a notoriously infected district as amongst those who, although but a few miles from them, were to windward of the infected area. If these are merely coincidences, they are worthy of being recorded. If there is any relation of cause and effect, it will not be in opposition to the large experience of many who have had to deal with Indian epidemics.

I am, Sir, your obedient servant,

March 10th, 1884. THEODORE D. ACLAND.

"BLACKWOOD" ON PROPOSED MEDICAL LEGISLATION.

WE cannot see in the clauses quoted any refutation of our statement that the writer of the article was in error in saying that students would have to compensate bodies whose examinations are superseded by the new final examinations.

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